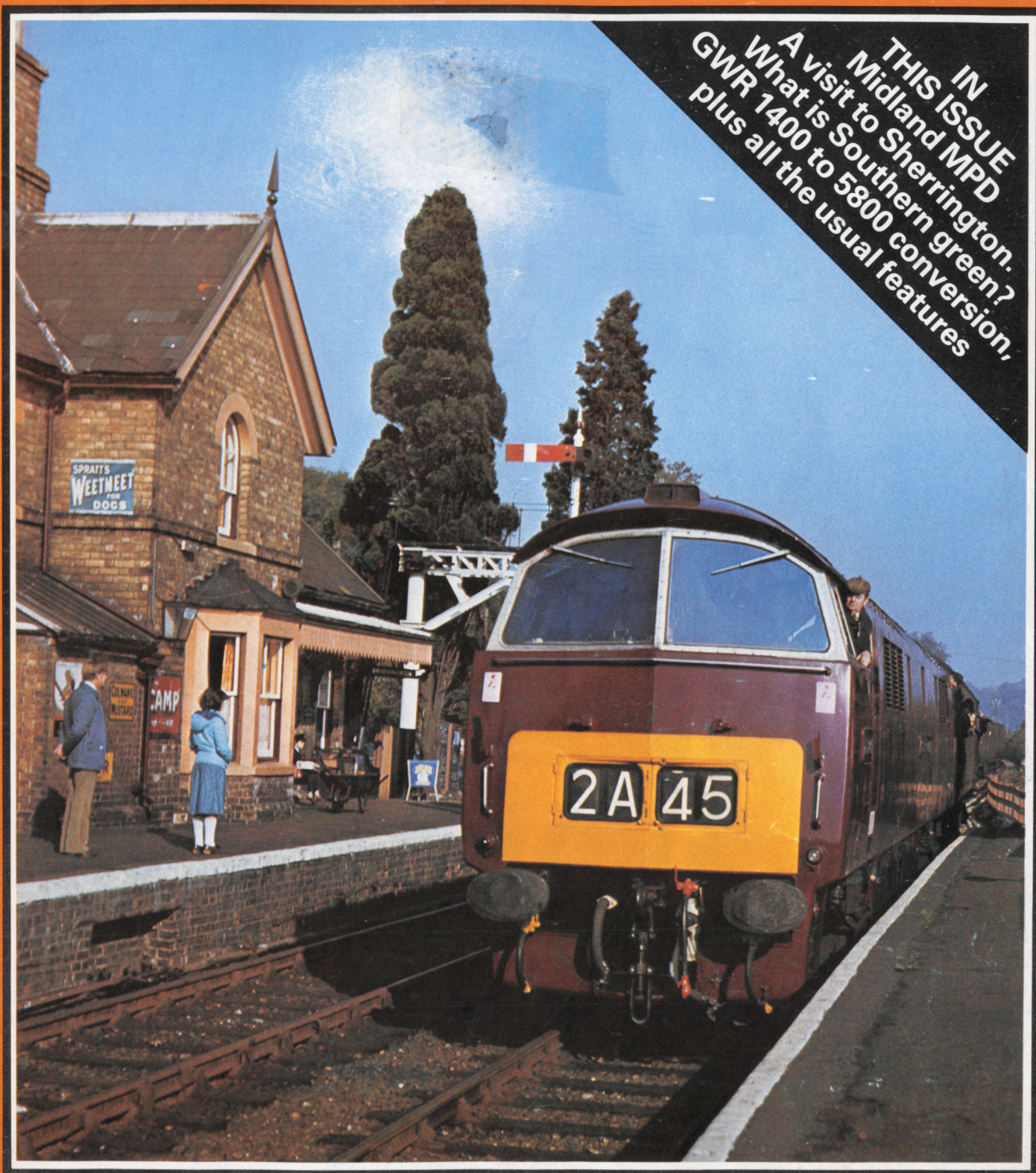


MODEL TRAINS

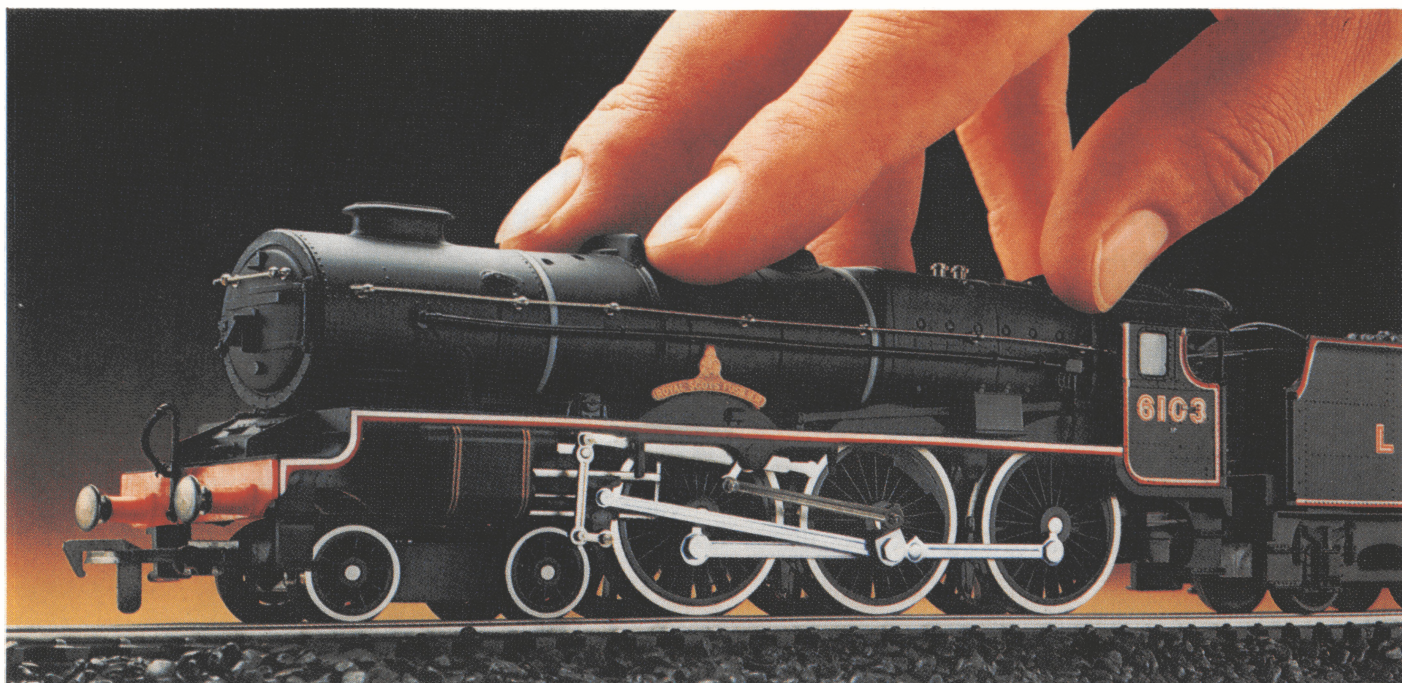
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FEBRUARY 1981



IN
THIS ISSUE
Midland MPD
A visit to Sherrington.
What is Southern green?
GWR 1400 to 5800 conversion,
plus all the usual features

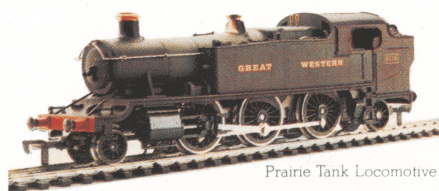


WE HAVEN'T ENGINEERED BRITAIN'S BEST TRAIN SETS JUST SO CHILDREN CAN PLAY WITH THEM.

GMR stands for Great Model Railways: the name of a new, remarkably superior range of train sets.

GMR are made by Airfix and we're already famous for the breathtaking accuracy of a whole range of models.

So when we decided to turn our engineering skills to train sets, the result was a standard of authenticity never seen before.



Prairie Tank Locomotive

WHY GO TO ALL THAT DETAIL?

It wasn't simply because we are Airfix and we've always believed our models should look like the real thing.

We had also unearthed some interesting facts: The first was that model trains are the country's fastest-growing hobby amongst children and adults.

From ordinary folk to Bishops and Dukes, people are giving in to that suppressed urge to run a railway.

They have been pleading — or in some cases, praying — for far more authentic models than they had been offered in the past.

Some had even taken to modelling Continental Railways because they believed that European models were superior to British. Bad show that.

The second was that modern children demand detail and accuracy to a degree that may surprise you.

And, thirdly, train sets are bought by fathers, and fathers told us that they expected to get as much fun out of them as their sons.

We simply thought they would be more likely to buy real models that were also tough enough to be toys, than toys that could never be real models.

THE LMS ROYAL SCOT SET— EUSTON-GLASGOW CIRCA 1945

The Royal Scot set is typical of GMR. It is as close to the real thing as we can get it.

The loco, the 'Royal Scots Fusilier' is built from the same plans as the original.

We've hand-assembled each loco superstructure alone from thirty-nine separate parts.



It is powered by a precision 'ringfield' motor that's as smooth at a scale walking pace as it is at one hundred miles an hour.

The coaches are equally authentic with full detail and corridor interiors.

Coupled together, it's a stunningly accurate model of the 'Royal Scot' as she pounded up from Euston to Glasgow around 1945.

GMR SETS—EVERYTHING BUT THE PLUG

One of the cruellest sights on a Christmas morning is a child with a train set that can't go because it isn't complete.

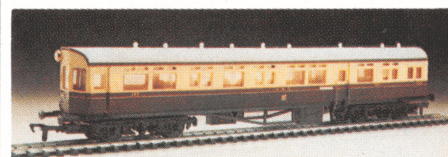
GMR give you everything you need to start playing the minute the paper's off. We

give you a mains controller/transformer, free.

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We give you a station, a bridge and a signal box made from sturdy card to lend instant atmosphere.

And we give you enough track to get you going, some sets even have points and sidings.



Auto-Trailer

EIGHT SETS COVER THE COUNTRY

There are seven other GMR sets available now. They cover everything from local steam goods trains to modern Inter-City diesels.

Each set contains a complete train recapitulating the real thing.

There are also many other model railway products made by Airfix from complete sets to individually boxed locos, carriages and wagons.

They are all of the same high standard as those bearing the GMR label.

Euston-Liverpool	LMS	1956	Goods
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Paddington-Didcot	GWR	1934	Passenger
Kings Cross-Newcastle	BR	1957	Express Goods
St Pancras-Leicester	LMS	1936	Passenger
Paddington-Birmingham	BR	1948	Goods
Paddington-Penzance	GWR	1934	Passenger



PRECISION MADE BY AIRFIX

MODEL TRAINS

February 1981



VOLUME 2

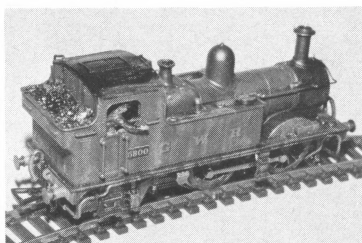
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Editor **Chris Ellis**
Assistant Editor **Heather Rawlings**
Art Editor **Ralph Laughton**

Editorial address
4 Surbiton Hall Close,
Kingston, Surrey,
England.
Telephone (01) 546 0758



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No, look again. It is not the familiar 1400 class, but the less well-known 5800 which was essentially the same but not motor-fitted (the motor control gear is missing from the buffer beam if you look). Just the thing for your GWR branch line, you'll find the simple changes described on page 76. Note the new number plate, real coal in the bunker, and wire handrails on the cab and bunker. We painted the visible parts of the motor matt black inside the cab, then added a driver and fireman.

On the cover

A fine summer's day, graced by the very clean maroon *Western Courier* handling a passenger train on the Severn Valley Railway where this locomotive is still at work even though 'Westerns' are long gone from BR metals. The picture dates from 1980, but the scene could just as easily be the 1960s. This issue we look at the 'Westerns' little brother, the 'Warship' (photo by John Everitt).

Editor's Desk

Notes, news and comments

New for 1981

A preliminary look at some forthcoming models

A Visit to Sherrington

How Eric Kay built a very realistic N gauge layout, by Michael Andress

Let's look at Couplers

We try out the Peco Magni-Simplex type

A Midland Motive Power Depot

If you collect model locos only you'll be interested in this fine layout by David Hunt

The Ballast Business

How to lay ballast by the 'bonded' method

Close Look at the Class 37

John Chalcraft supplements last month's article

From 1400 to 5800

Chris Ellis converts the Airfix 0-4-2T, a simple project for beginners

Trainlines

Letters and comments from readers

A Question of Colour?

What exactly was Southern green? Ian Huntley sorts it out

Make a 24½ Ton Wagon

Economy model by Andy Brocklebank uses up bits from Airfix kits

Simple Vintage Lorries

Derek Chuch converts Airfix military trucks to make some realistic lorries of the 1930s

The Way of the 'Warships'

A look at the class, adding to the models, and a long term test report by Richard Gardner

The Western Mining Co

Our little layout is completed this month

The Westport Branch

Structure building for the layout, using Linka, by Michael Andress

Shopwindow

New products, new models, new kits, assessed and reviewed

Test Track

Lima 'Crab', Liliput Class 42, and some Märklin models

Roadscene

Gerald Scarborough's round-up of road transport and news

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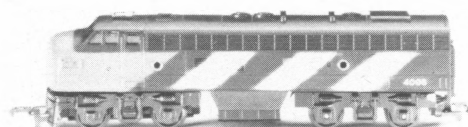
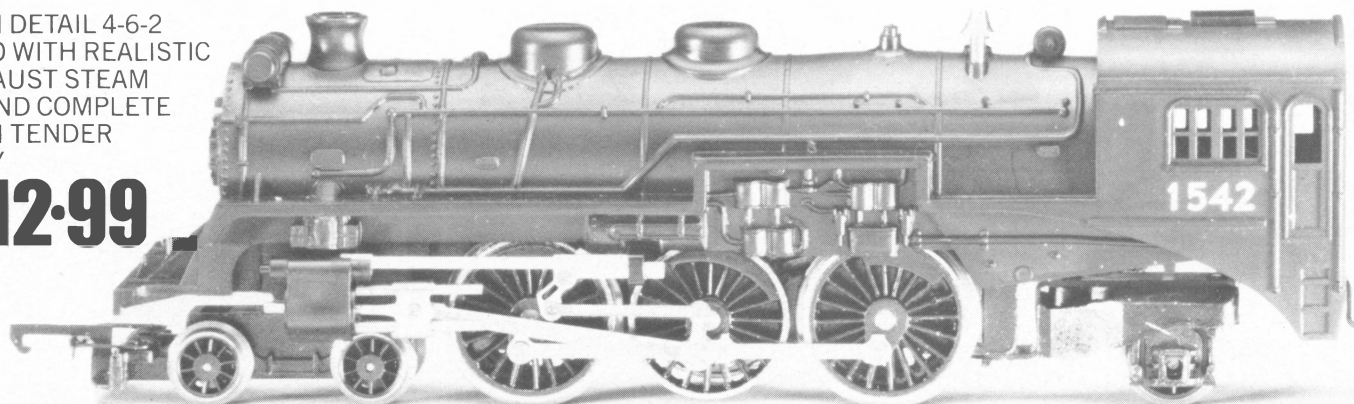
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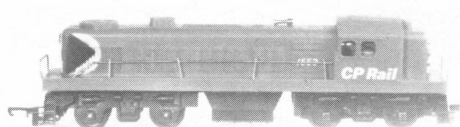
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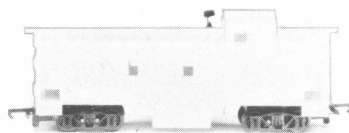
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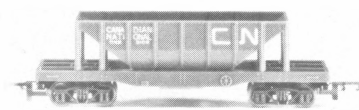
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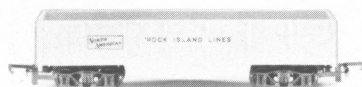
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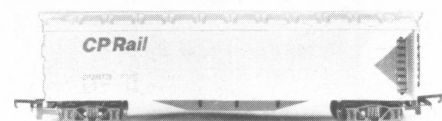
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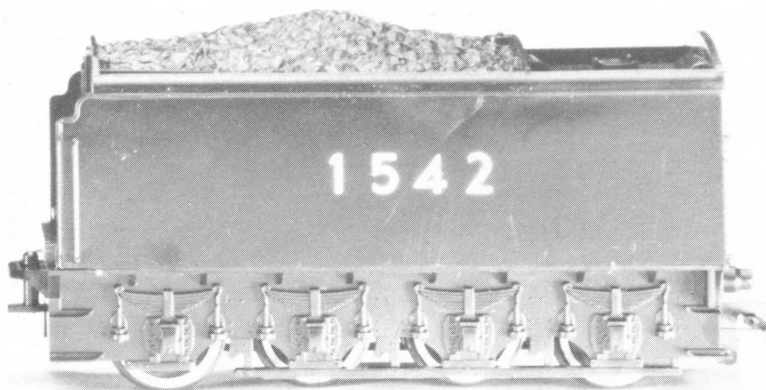
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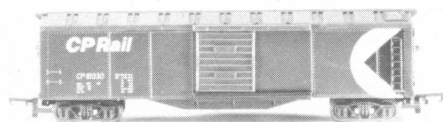
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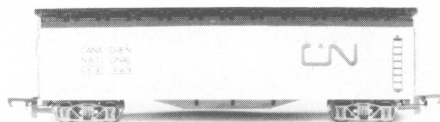


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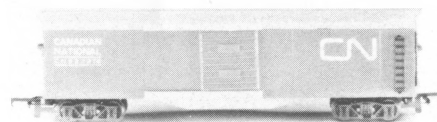
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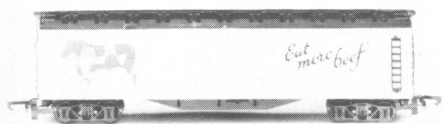
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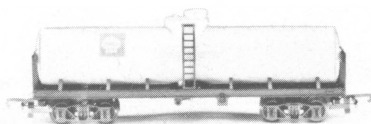
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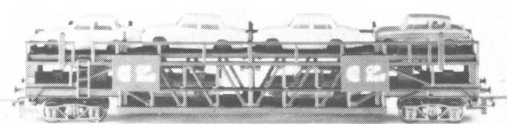
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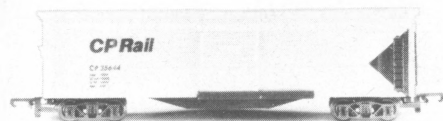
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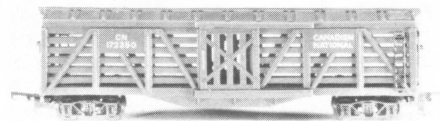
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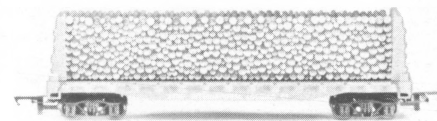
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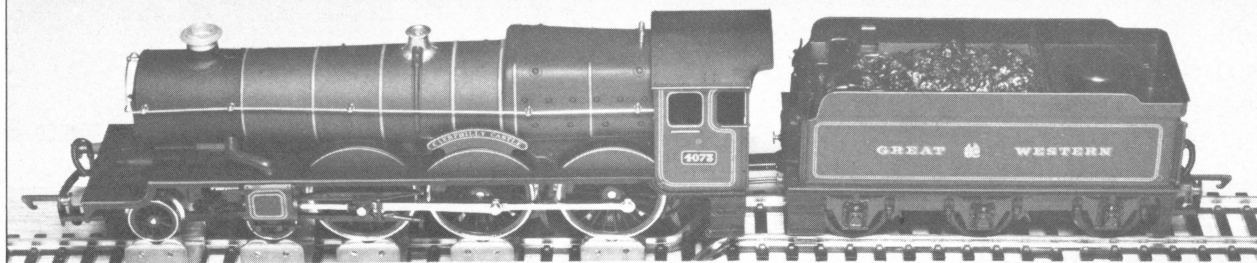
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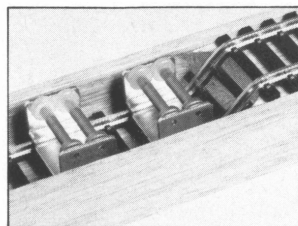
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Suitable for 'OO' or 'HO' gauge locomotives, a set of rollers is positioned under each of the drive wheels and bogies. The unit is then connected to your control unit. This will allow you to obtain peak performance from your loco.



The HM Relco.

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current between loco and track, breaking down dirt deposits and allowing the DC current to flow unhindered – a continuous smooth

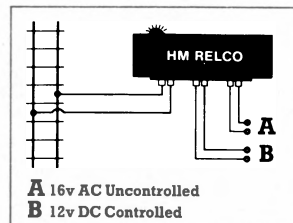
operation, with no jerks, no stops. Wiring is simplicity itself, with easy connections between the track and your H&M Controller, providing it has 12v DC controlled and 16v AC uncontrolled outlets.

A suppressor is also supplied for any old locomotive you may have, should one not be fitted across the brushes to the motor.

The unit is not of course a substitute for thorough track cleaning, but postpones the operation.

The HM Relco is not suitable for Airfix MTC, Hornby Zero 1 or the new HM 5000 Advanced Power Transmitter.

Further details of these and other items in the range can be seen in the 11th edition HM Model Equipment Handbook *only* from H&M stockists.

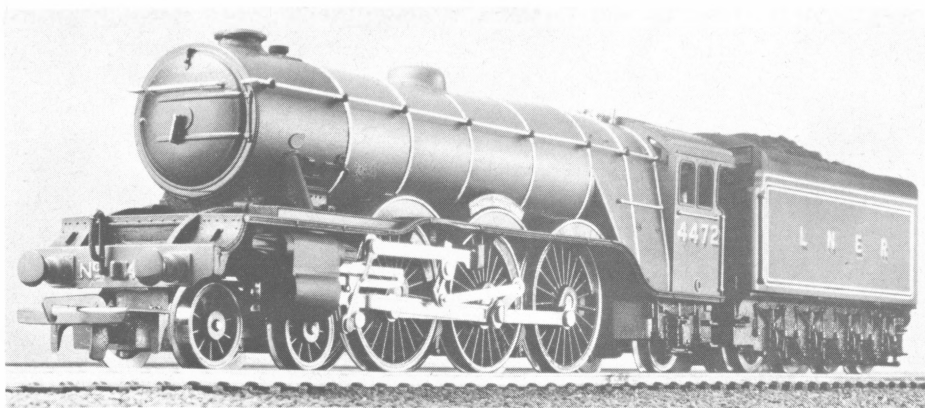


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Gresley rides again in 1981 in no uncertain manner, and LNER enthusiasts should have no cause for complaint. This is the new Hornby version of Flying Scotsman drastically reworked with tender drive, full boiler, loads of extra detail, and depicting not the popular A3 version but the original A1 type with early boiler fittings (note round dome) as running in 1928. Airfix N2, due for release about now, was another Gresley design.

Editor's desk

Space is extra tight this month as we have an initial report on some 1981 releases, though everybody is being more cautious than usual it seems because of these uncertain economic times. No doubt we'll be seeing rather more than we cover this month, notably because the Germans and others don't announce their 1981 programmes until the Nurnberg Toy Fair which takes place in early February. A sign of the times is that Hornby won't even be at the London Toy Fair. They have timed their usual (full-size) Hornby Train to tour Britain, then end up with all the goodies aboard at Olympia station, near to Earls Court, so that their display will be on the train and not duplicated on a stand at Earls Court.

At the receiving end of all the products, we consumers can't really complain because never have we been so inundated with fine models. Some may niggle because, say, there are not enough Southern models (sorry to pick on you!), but overall there are more models on the market than anyone can possibly store in the average house, or run on the average layout, let alone afford to purchase. One of the troubles in the toy and model industry at the moment (as indeed in the economy at

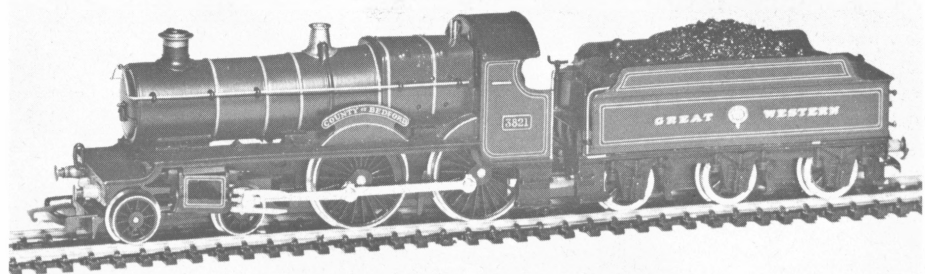
large) is massive production up against tight money so the customers can't buy all that the maker's produce. If you make any resolutions for 1981 it might be to keep buying something, and if you are an armchair modeller, get going on some sort of layout and buy the stock and trains to run on the layout. Don't just sit there reading about it and dreaming of the layout you may get round to building one day. Model railways is, fortunately for us, still one of the cheapest of hobbies, particularly if you have only a small layout, and there is such a choice of models (and prices) that there is something for every taste and every pocket. However modestly you spend you'll be helping the industry keep going so there will always be the happy choice we enjoy to right now.

This month we have no 'Basis for a Layout' feature, but we do have two layouts, Sherrington and the Midland MPD, to show two approaches in two different scales. With a 'Warship' and a 5800 we seem to have a Western bias again, but it keeps on happening!

Next month we'll be looking at trams and their modelling possibilities.

Chris Ellis

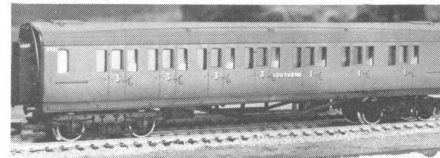
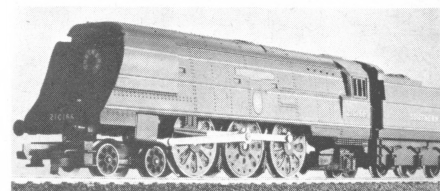
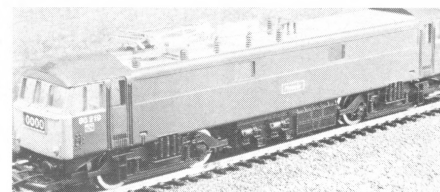
Below: Famous in the 1930s were the Hornby 4-4-0s in 0 gauge. Now once again the same locos will be introduced, this time in 00 gauge. Most famous of all the Hornby 0 gauge models was the GWR County of Bedford, and here it is again, looking good in 00. As well as the SR 'Schools', incidentally, Hornby also did the SR L1 4-4-0, which was done in 00 by Hornby (or Triang) some years ago.



New for 1981

This issue goes to press long before the main 1981 toy fairs take place (London and Nurnberg), so what is promised in 1981 from the trade in general is not completely known. We hope to give coverage to what we spot at the toy fairs themselves in later issues, as at the time of writing we have advance information from only a few manufacturers. Fewer this year than last seem brave enough to commit themselves to a model programme, and the uncertain economic conditions have also no doubt contributed to some delays in the plans announced for 1980 by several of the bigger manufacturers. Of the major manufacturers whose output we could monitor in 1980, only Hornby, Bachmann, Fleischmann, Arnold and Märklin seem to have produced virtually all they announced in their 1980 lists (though there may be others we missed). Thus 1981 will no doubt see some 'catching up' with models delayed from 1980. Indeed Lima have delayed their eagerly awaited LNER V2 until 1982 and several models announced for 1980 are now in their official 1981 programme.

Starting with Lima, therefore, their range of British models in 00 will feature the GWR railcar in GW/BR versions and the DMU delayed from 1980. The DMU will be in BR blue/grey as well as the previous green and



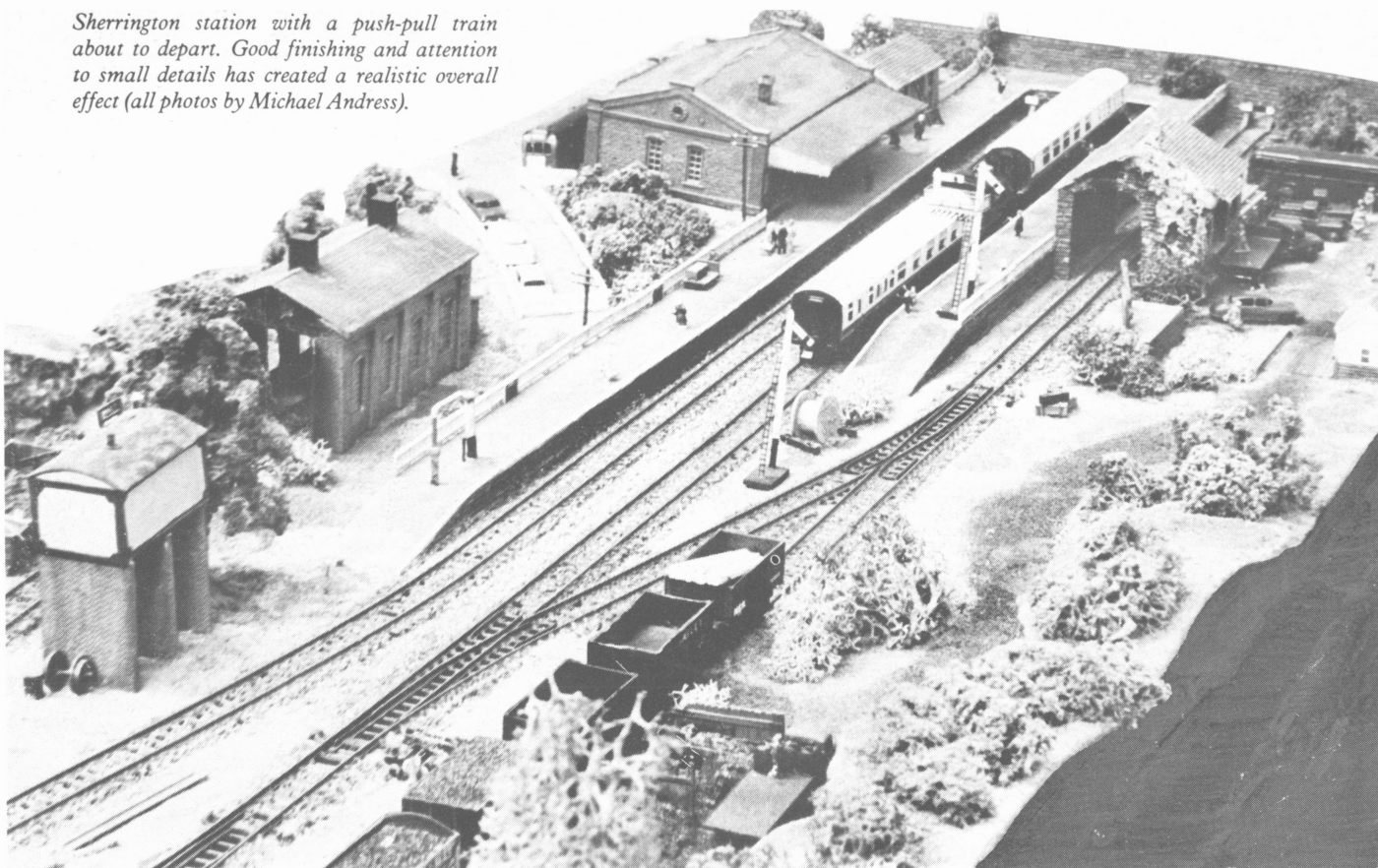
More from Hornby for 1981: Class 86, BB 4-6-2, and SR coach.

blue liveries. A parcels express version of the GWR railcar is also now promised. Class 87 *City of London* is another delayed from 1980, but a completely new model announced (and much needed) is a Class 50. New colours for the BR Mk 1 coaches (regional) and the Procor stone hopper, plus BR maroon finish for the Siphon G are promised. There is to be a whisky grain hopper in three PO finishes, Vat 69, Haigh, and Black & White, and another much needed type, the BR bogie GUV, which will be issued in current BR blue marked 'Express Parcels', BR maroon, and Theakston's beer livery. Finally coal loads will be fitted to the existing coal wagons.

Lima N gauge will have the long-promised 'King' 4-6-0 in GWR finish or early BR blue and there will be a 'Western' class diesel in maroon, sand, green, or blue finishes. Rolling stock will include a Siphon G in BR maroon, a 20 ton box van, and coal

Continued on page 89

Sherrington station with a push-pull train about to depart. Good finishing and attention to small details has created a realistic overall effect (all photos by Michael Andress).



Sherrington

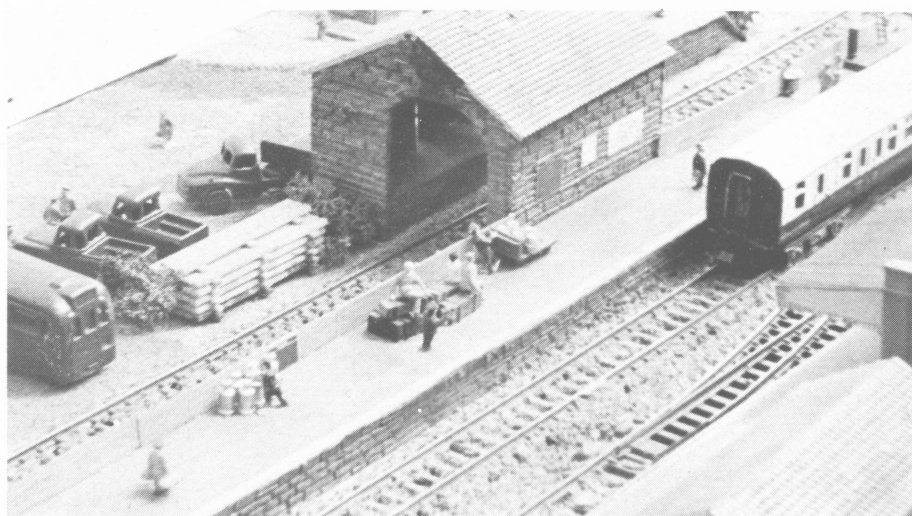
This classic N scale layout is now owned and operated by Michael Andress . . . it's loaded with good ideas

The Sherrington Branch is an attractive N scale layout and is an excellent example of the popular point-to-point, terminus to fiddle yard design popular with branch line modellers. The terminus itself was largely constructed by J.E. Harvey-Watkins who later passed the model on to Eric Kay. Eric extended the layout and also built the impressive viaduct section. He had plans for considerable further developments but these were unhappily curtailed by his untimely death a few years ago. Recently his widow, Betty Kay, has very kindly given me the layout for my two sons to operate so the trains are now running again to Sherrington. The layout has many features of interest and is a classic of its sort. It shows just what can be achieved in N scale and, of course, could be used as a basis for similar layouts, either in N or in other scales.

The point-to-point design of this type has many advantages and it is very suitable for the beginner as it can be developed in stages, each of which

allows interesting operation. The terminus can be constructed first and needs only a length of track fitted on to it temporarily during operating sessions to permit trains to be run in and out of the station and appropriate shunting

A closer view of the platform and goods shed at Sherrington as the push-pull train moves off. Note the 'busy' grouping on the platform. Platform facing and goods shed are from embossed stone sheet.



at the terminus.

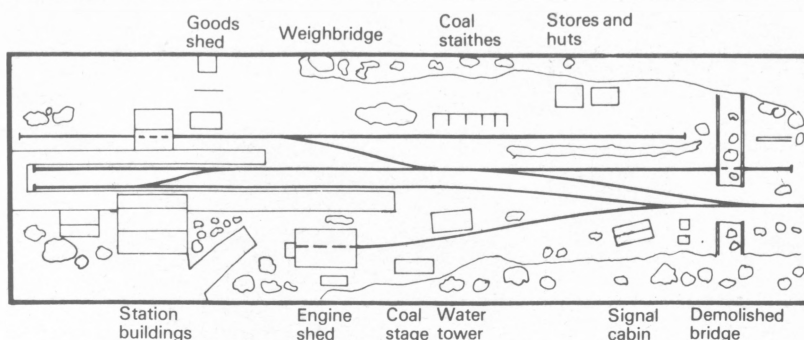
Next the country section leading to the hidden sidings can be added. Because it is possible to turn the track through a full 180 degrees within the 15½ inch width of the baseboard the fiddle yard can be tucked away beneath the low hill at the rear of this section, enabling the maximum length of run and scenic potential on this section. The layout can now be considered complete and full operation is possible. However, it is very easy to extend the layout giving a longer run and more features, both railway and scenic, by building one or more intermediate sections to fit between the two end units.

Scale: 1 inch to 1 foot.

**Section 1:
Sherrington**

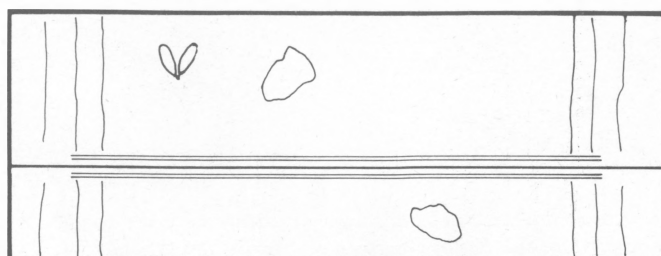
4ft 1 1/2 in long / 15 1/2 in wide.

Note: Layout can be joined as sections 1 + 3 only, or as sections 1 + 2 + 3.



**Section 2:
River and viaduct**

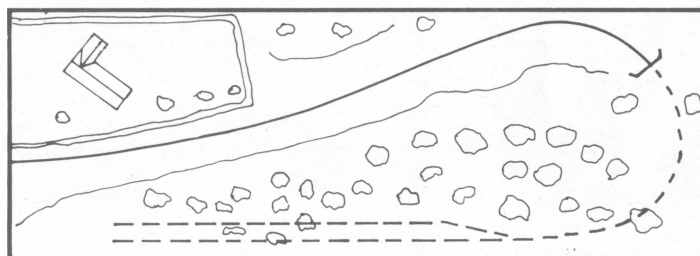
32 1/2 in long / 15 1/2 in wide.



Entire board finished as river with banks and islands.

**Section 3:
Hidden sidings
(fiddle yard)**

Hill side is open to give full access to fiddle yard tracks.



The engine shed was scratch-built from card covered with Highfield brick and slate paper. Walls were made in two layers to give the proper depth to the piers and recessed areas between. Note the neat water crane scratch-built from a ball-pen refill, plastic rod and other odds and ends.

Eric Kay constructed the attractive viaduct and river on one such section and had further units planned. Even if space limitations restrict the length of the layout to only three units, two end sections and one intermediate one, you can still build additional intermediate sections providing you make them interchangeable. You can then use whichever of the intermediate units you want for any particular operating session. The flexibility of the scheme also enables

you to replace a section with a better one as your modelling standards improve, without any interruption to the use of the layout.

On the Sherrington Branch baseboard construction follows standard practice with framing of 2 inch by 1 inch timber, with the joists between the longitudinal girders at approximately 12 inch intervals. This framing supports a baseboard top of wood fibre insulation board.

Track and turn-outs are Peco products

and were glued down direct on to the insulation board and ballasted with granite chips. The turn-outs are electrically controlled from the panel by means of Peco point motors mounted beneath the baseboard surface. Electrification of the layout follows conventional practice.

The realistic scenic work adds greatly to the overall appearance of the layout. The rock faces are cork bark set into Polyfilla and the remainder of the scenery was shaped with Mod-Roc and Polyfilla. The careful selection and application over wet paint of suitable scenic dressings has given a very realistic texture and colour to the scenery. The trees and bushes have mainly been modelled with lichen but some commercial trees, improved by adding scenic dressings to give more texture to the foliage, have also been included.

Most of the structures have been scratch-built. However, the station building is a modified Pola kit which has been re-roofed with plastic card and slate paper. The weighbridge is a Prototype Models card kit structure and one of the signal boxes is a Lone Star model. The remaining buildings were made from card or plastic card with coverings of brick and slate paper (Highfield) and stone embossed plastic sheet (Kleive). One of the most interesting features at



Sherrington signal box was also scratch-built. Model was based on a GWR cabin near Cheltenham. Note the ballast bin and lineside hut at the left of the picture and the other smaller details all of which add to the overall realism of the scene.

Sherrington is the partly demolished bridge at the station throat. This was built up from cut outs of the Kleiwe embossed stone sheet for the sides and parapet walls with plastic card for the roadway. The undersides of the curved arches were filled in with thin plastic card bent to shape. The protruding string courses and the arch liner stones were added from thin plastic card. The broken end was modelled by filling in with plastic putty and with offcuts of the random stone sheet.

The large viaduct is of quite different construction and was built up from pieces of expanded polystyrene. This material is light and easy to work, giving a realistic result, but care must be taken to choose adhesives and paints which will not affect the plastic. Ceiling tile adhesive and household emulsion paints are safe and suitable. Poster colours can be used for final colouring giving varying shades and tones over the basic emulsion colour.

Many small details complete the scenic picture. Telegraph poles and notice boards were made from scraps of plastic card and rod. The notice boards are white plastic card painted black, then scratched when dry to give the effect of white lettering on a black background. Signals have posts of fine strip wood with ladders and brackets cut from clear thin plastic lined in black to represent the iron work. Signal arms are also plastic, painted appropriately.

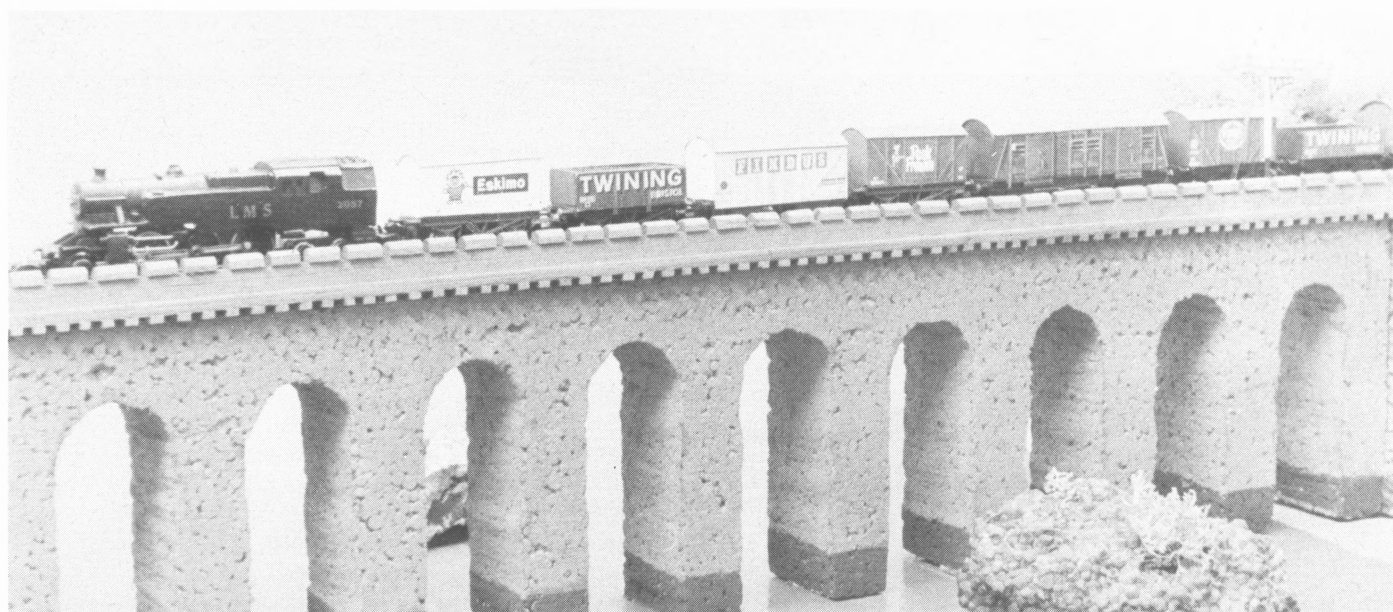
Numerous human figures from various manufacturers are included to give life to the layout. Cars, buses and lorries are from Viking and Lone Star. The boats on the river are modified lifeboats from plastic ship model kits. Drums, barrels, crates and so on are from various commercial sources.

For exhibitions two operators ran the layout, one at Sherrington the other



Above: The layout could be operated in the transition period with steam and diesel power. Here a Grafar diesel shunter is seen with a modern Peco tank wagon. Note the realistic track with neat ballasting using granite chips. The sides of the rails have been painted with track colour, and all this helps considerably to make the over-scale N gauge track look much 'finer' than it really is.

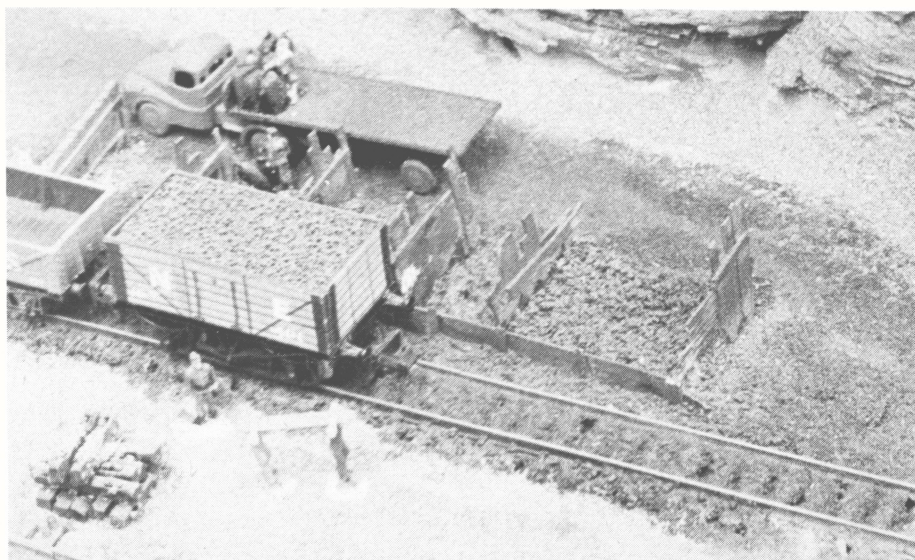
Below: The impressive viaduct constructed from expanded polystyrene. The parapets are made from balsa. River is painted with several coats of clear gloss varnish giving a good water effect. The loco is a Fairburn LMS class 4 from a Peco cast metal kit on an Arnold 2-6-4T chassis.



working the fiddle yard, using a bell code for communication and running to a timetable.

The layout can represent a variety of periods with only minor modifications such as changing the motor vehicles and the railway locomotives and rolling stock. It is most suited to steam branch line operation but could also be used for the later transitional period with both steam and diesel in action. Another alternative would be to convert it into a model of a preserved line enabling a wide variety of locomotives and rolling stock to be correct while still setting the layout in the present period.

It is worth noting that no attempt has been to do anything 'clever'. The track layout is really very simple with the minimum number of sidings. The careful scenic and building work is what gives the model a realistic atmosphere. Though beginners are often impressed by seemingly complex track layouts, the fact remains that the more turn-outs and sidings you have the more chance there is of running into discouraging operating and electrical snags. Sherrington works well and has offered enormous scope for interesting scenic and detail work. Indeed Sherrington should well demonstrate that in terms of detail and realism you can do virtually anything in N scale which you could do in OO, and because large radius turn-outs can be used the overall railway-like atmosphere is if anything better in N scale than could be achieved in OO.



Above: The coal staites were modelled with scraps of thin wood. The articulated Bedford lorry is a Lone Star product and is no longer made but a similar vehicle is available as a cast metal kit from Thameshead Models. This typical goods yard activity is perfectly captured here. **Below:** Sherrington station building is a modified Pola factory kit which has been given a new roof.



Below: The very effectively modelled partly demolished bridge at Sherrington depicts a closed railway line and the ends are fenced off, with foliage now growing on the track bed. This idea could be used for larger scales too.

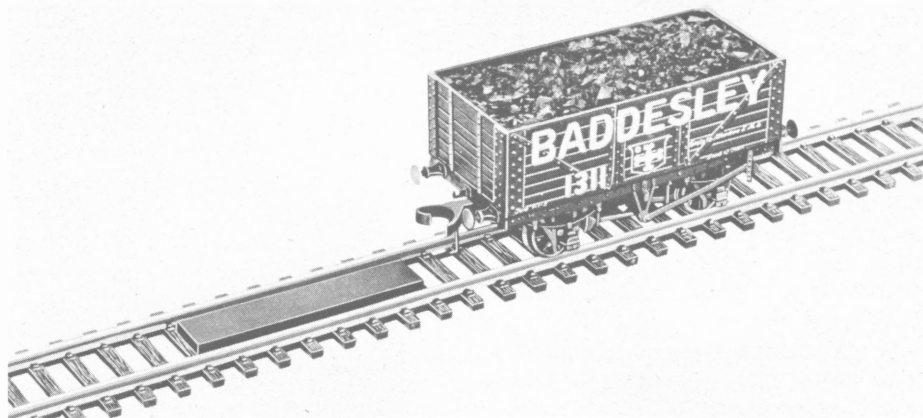
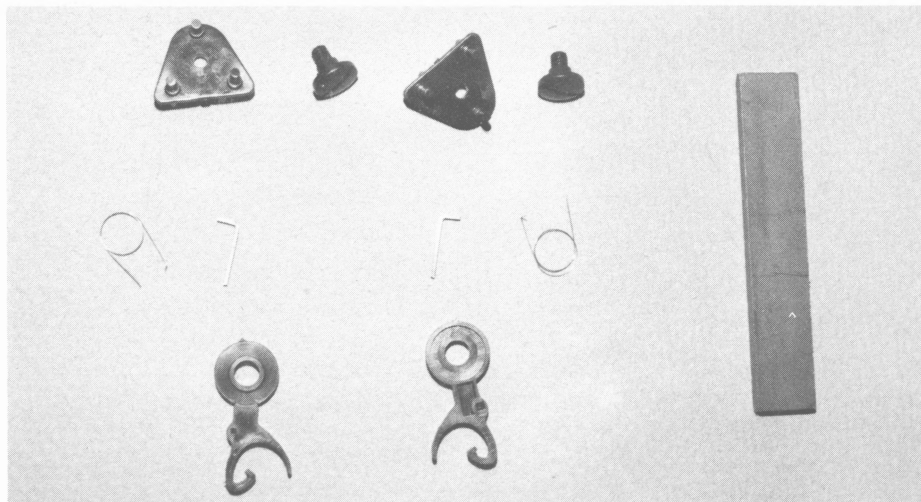


In the March 1980 issue we covered the Kadee magnetic coupling, in particular the HO version made with a long shank to suit European rolling stock. We mentioned at the time that Peco were producing a new Magni-Simplex coupler which offered magnetic characteristics similar to those of the Kadee. At the time the Peco coupler was new on the market and we could find no local stockist. Soon to the rescue, however, came Norcol Models, 30 Braunstone Gate, Leicester, a major Peco stockist. They kindly sent us sample couplers as soon as they were to hand and since then Peco have also supplied us with samples so that we have now a good chance to examine and work these couplers.

The Peco Magni-Simplex Coupler Mk III (to give it its full title) is a logical magnetic development of the original Simplex coupler. Digressing for a moment, the Simplex coupler was a Peco design of the immediate post-war period, and this was licensed to Meccano Ltd (for use with Hornby-Dublo) and was also used by British Trix. It was indeed an early attempt at producing a standard automatic coupler, and it has a lot of virtues despite the fact that the major train makers in Great Britain eventually followed the Triang lead given by the tension-lock coupler which is now the most common commercial type. You can still get the pressed metal Simplex coupler from Peco (it was used in all their wagon kits, and is sold separately). It is also supplied in Peco's current range of 7mm scale narrow gauge kits. Wrenn produce a plastic version as an accessory, actually a variant produced originally for Hornby-Dublo to replace the original metal form. This plastic version is quite 'lumpy' in appearance and much more obtrusive than the neat metal version.

The Simplex coupler has a side swinging action with a knuckle which engaged the knuckle in adjacent couplers as the wagons are pushed together. A vertical bar engaged a ramp in the track for uncoupling. A very nice feature of the Simplex is the way it allows any vehicle to be lifted vertically from the track without disturbing its neighbours, useful for re-railing or replacing a lame runner.

Here are the contents of a Magni-Simplex packet — two complete couplers with operating pins, centring springs, screws, knuckles and an adapter base (the triangular section) which may or may not be required depending on the vehicle fitted. Magnet is shown at right and is sold separately. You need one for each uncoupling position.



Peco's own photo of a Wonderful Wagon shows well the uncoupler magnet glued on to the sleepers, and the mounting of the Magni-Simplex coupler with its metal operating pin.

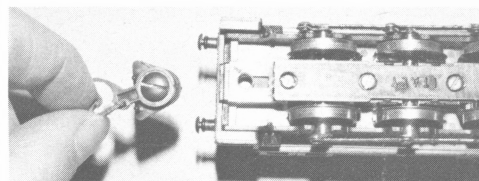
Let's look at Couplers

In which we examine and test Peco's Magni-Simplex system

The new Magni-Simplex coupler shows its heritage in its shape. It still has a sideways swinging action, and the knuckle portion is almost identical to the old knuckle, but in plastic and with rather wider jaws. The operating pin is a metal section which force fits into the plastic knuckle. The metal pin reacts to the magnetic field from a magnet set in the track, and this causes the pin, and hence the knuckle to swing sideways if the couplers are stopped immediately over the magnet.

A simple circular spring re-centres the knuckle once it is moved away from the magnet.

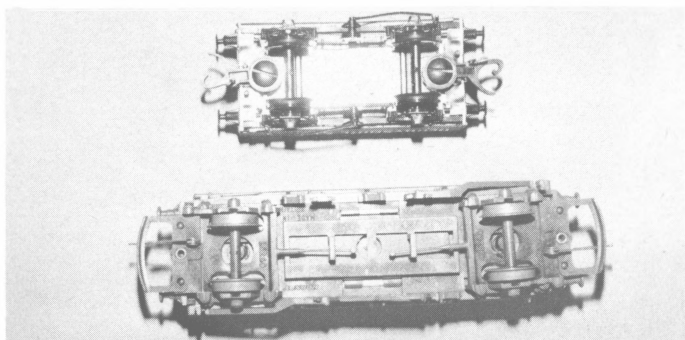
All other characteristics of the Magni-Simplex are quite similar to the Kadee, except that assembly is nothing like as fiddling, for the spring, and the other components are bigger and simpler. On the other hand because the parts are bigger the coupler is also more conspicuous. However, it also has to be remembered that while the Kadee sets out to be a fairly true miniature of an actual knuckle coupler, the Magni-Simplex is a functional coupler only, not depicting an actual type of coupler. But the



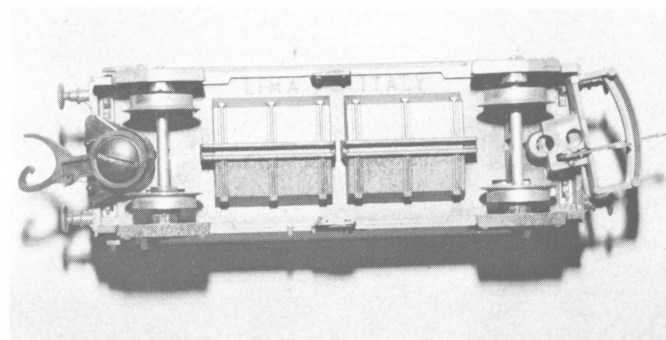
Some idea of fitting problems is seen here. The Lima diesel shunter has a convenient hole in the fixing position, but it is far too big for the fixing screw so much be plugged first. Then the baseplate of the chassis must be cut away about 1/8 inch (flush with the buffer beam) to bring the Magni-Simplex coupler to the correct operating height. This is one of the easier locomotives to adapt.

Magni-Simplex is less conspicuous than all tension-lock couplers except the current Fleischmann and early Airfix types.

All Peco Wonderful Wagons now come with the Magni-Simplex as standard, and the locating holes and pins in the Peco underframes give easy and exact positioning without the need for a gauge, but Peco don't make one anyway, unlike Kadee. The pack containing the coupler set does, however, carry a diagram giving essential height and spacing data. For example the operating pin should be set 1/32 inch above rail level, though there seems to be leeway here as we found the coupler still worked when the pin was inadvertently set somewhat higher than this. We found some variation, too, in the centring action of the spring, some couplers proving more sluggish than others after assembly. This did not appear to effect the magnetic action, unlike the Kadee where the effectiveness and correct positioning of the spring is critical to successful operation.



The Peco Wonderful Wagon (top) comes with pins and screw holes ready to take the Magni-Simplex coupler as supplied. On the other hand the Hornby Merry-go-Round hopper is one of several commercial models which virtually defies attempts at fitting due to its design and method of construction.



By contrast this Lima Procor wagon (and some other Lima types) are much easier to fit with Magni-Simplex. Just pull out the tension lock coupler, cut away the mounting lug, and drill out holes for the Peco adapter plate.

So what about the financial side? A set of Magni-Simplex couplers has a RRP (at the time of writing) of £1.10 so it works out this much extra per vehicle if you set out to standardise on the type. Magnets cost 70p each and you need one for each uncoupling position. It seems likely that other magnets will effectively work the couplers. For example we tried a Kadee N gauge magnet, about half the size of the Peco one, and this also worked the pins. The magnet has to be laid in a straight section of track (it is simply glued on top of the sleepers) but the delayed uncoupling effect, done by pausing to uncouple, then gently backing up, enables an uncoupled wagon or cut to be propelled from the magnet position around curves before being left in the required position.

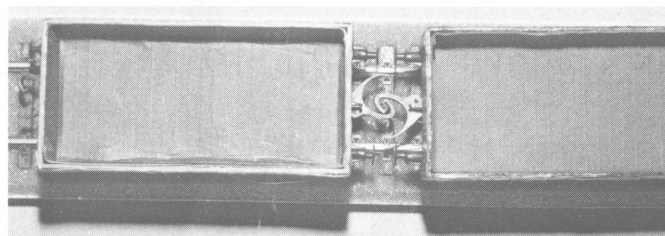
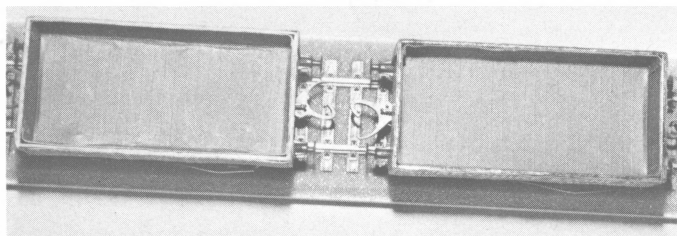
Our tests showed the coupling to be virtually foolproof and a delight (and fun) to use. The pictures show the characteristics. As with Kadee, however, it is not an entirely straightforward matter to fit the couplers to other makes of stock. There is just no standard method of fixing couplers and some makers, like Hornby and Lima, are not always consistent through their range. You need to be prepared for a little butchery with most ready-to-run stock and locomotives. We tried a few examples and examined others to see the prospects. In

general the Airfix and Lima wagons we looked at appeared to be the easiest to convert (examples are shown) but even they need some hacking about. The Lima Prairie locomotive has room under both buffer beams for the coupler to be fitted and is all plastic. By contrast the Airfix 0-4-2T has a lot of metal and chassis detail just where you would want to install the Magni-Simplex. The Airfix tension-lock coupler pops happily into the socket left for it, but the Magni-Simplex needs far more room. When it comes to something like the recent Hornby 2-6-4T what do you do? It has cast metal bogies which don't take kindly to drilling, if you want to mount the couplers on the bogies. It looks easy enough to mount a front coupler under the buffer beam, but at the rear there is a hefty die-cast chassis block which would need some hacking away before the coupler would fit. Having done this, you'll then need very gentle curves for couplers mounted rigidly to the body on a long loco like this will suffer severe sideways deflection on ordinary train set curves — overhang is considerable — and that could well derail your train. So we must qualify our enthusiasm for this coupler system by pointing out that you must be prepared to do a fair amount of work when fitting the couplers to some

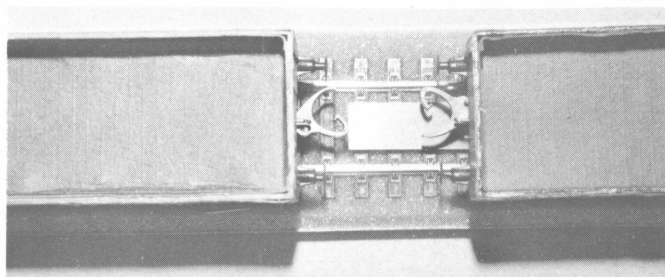
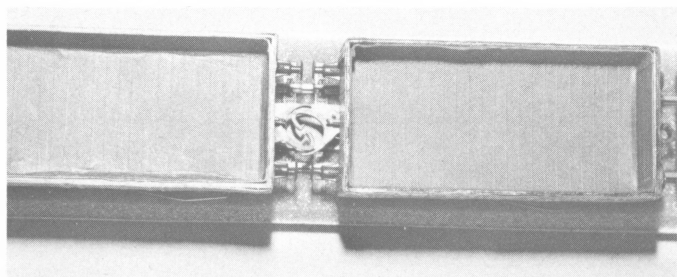
chassis. Obviously an experienced enthusiast would overcome all these problems, but a beginner might be disappointed if these limitations were not realised from the outset.

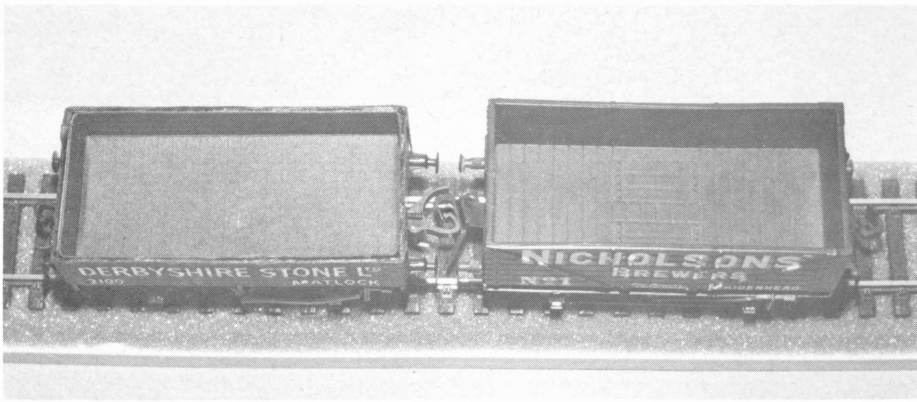
For what it is worth, one suggestion which comes to mind would be to fit the Simplex coupler to coaching stock and other vehicles which are not much shunted. Then fit Magni-Simplex to freight stock and the locos which handle it, choosing if necessary locos which are easiest to convert. Simplex and Magni-Simplex coupler won't join up when pushed together, but minimal coaxing with a cocktail stick 'shunting pole' makes coupling and uncoupling quite simple. We tested this with the Trix version of the Simplex coupler, but we imagine our findings would apply to the Peco and Dublo versions. If you do mix Simplex and Magni-Simplex you need to cut down the vertical tails on the Simplex couplers because they foul the magnets at their normal length. This in turn renders them ineffective on the Simplex uncoupler ramp... but you can't win all the time! Certainly the effective 'hands of uncoupling' of the Magni-Simplex system is most impressive and pleasing, making the system worth your consideration if you seek something more sophisticated than tension-lock couplers.

Below: The basic Magni-Simplex operating pattern is shown here. First picture shows two vehicles approaching each other with couplers in the normal position. When the knuckles meet they are each pushed momentarily sideways, when the knuckles then engage each other. The original Simplex coupler design worked the same way. It can be seen that as there is no obstruction above the coupler any vehicle can be lifted straight up from the track with no need to twist it or touch adjacent vehicles — a useful advantage.

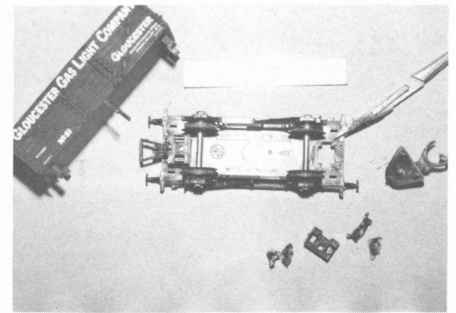


Below: When the wagons are stopped over the uncoupling magnet the magnet field repels the metal operating pins which carry the knuckles sideways with them. The uncoupled wagon is then drawn away. If the train doesn't stop the couplers are kept in tension and no uncoupling takes place.

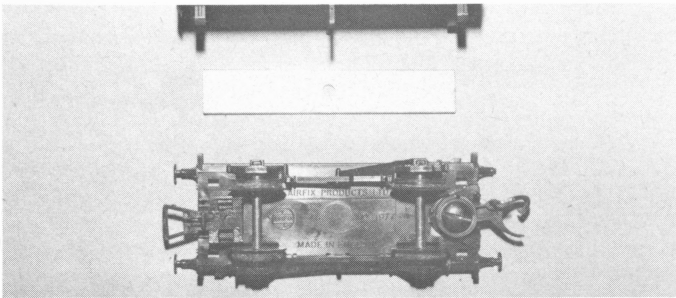




As can be seen here, the original type of Simplex coupler (right) connects with the Magni-Simplex but may need a prod with a cocktail stick to help it couple and certainly needs help with uncoupling. Example shown is an old British Trix PO wagon.

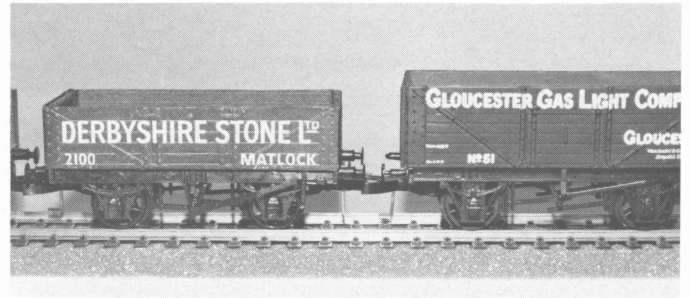


Fitting Magni-Simplex couplers to Airfix wagons is typical of the sort of adaptation work involved. First the wagon must be taken apart and the coupler pocket is cut away with knife and razor-saw.

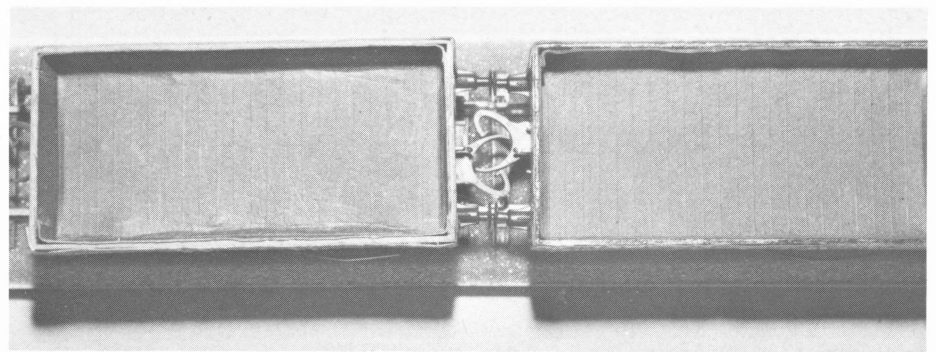


Next drill three holes to take the adapter plate. As it happens they fall just outside the 'hole' above the coupler pocket. But because there is a ballast weight above the underframe the pegs in the adapter plate must be cut very short, so we used Five-Minute Epoxy to reinforce the join.

Right: Here's the neatest trick of all — the delayed uncoupling feature of Magni-Simplex. Stop the vehicles over the magnet, pull forward and back-up very gently, and fractionally, and the couplers take up this position. Now the wagon (or cut of wagons) can be pushed along to any other part of the layout and left behind when the train draws back. This feature can be used for fly shunting and could be spectacular on a model hump yard, where a train could be split into several sidings. To re-engage normally just give the wagons a fresh impact.



And here's the converted Airfix wagon running quite happily with Peco wagons. Airfix floor thickness is exactly right to give the correct height for the coupler without any further adjustments (yes, we know about that broken buffer).



Derby Gauge O Group have decided that from January 1, 1981, it will be known as the East Midlands Gauge O Group, due to membership from a wider area. For further details please write to the Secretary, Ian Longdon, 10 Alton Close, Allestree, Derby, DE3 2LJ.

Stour Valley Railway Preservation Society have organised the Seventh Romford Railway Exhibition on Saturday January 17, 1981, at

Clubs and Societies

Marshalls Park School, Pettits Lane, Romford Essex. Adults 50p, children and OAPs 25p. 10.00 — 18.00. Working layouts, preservation societies, trade stands and refreshments.

Abingdon and District MRS have an exhibition on Saturday March 28, 1981, at St Nicholas Church Hall, Abbey Close, Abingdon,

Oxon, from 10.30 am - 5.30 p.m. Adults 40p, children 15p.

Lynton & Barnstaple Railway Association (London Area) have an exhibition on Saturday February 14, at St Mary's Church Hall, Oxted, Surrey, 10.30 — 5.30 p.m. Layouts and trade stands will be featured it is hoped to show a film of the early days of the L & B. Adults 40p, children 20p.

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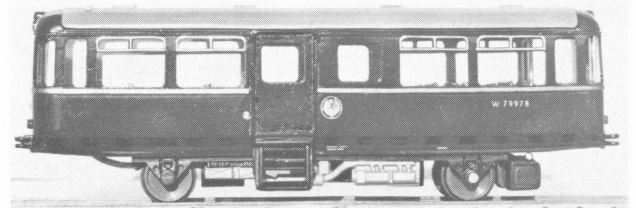
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BR Class 45 diesel, blue	£9.95
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A4 4-6-2 BR, LNER	£26.95
City 4-6-2, LMS-BR	£27.75
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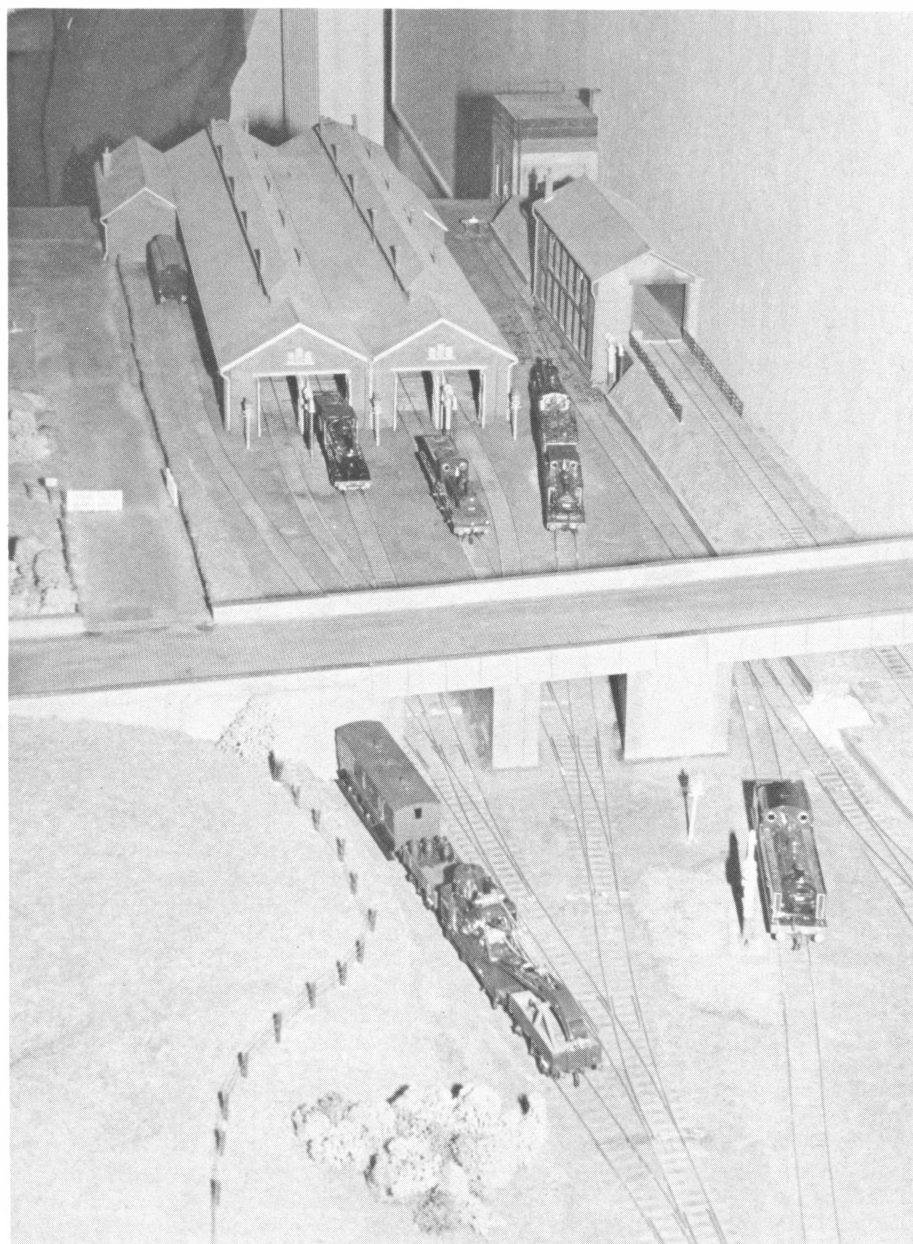
This is a layout idea with a difference — it is simply an engine shed module of generous size, ideal for displaying a big locomotive collection yet allowing a certain amount of running on the board, including loco coal wagons and stores vans. Midland pre-grouping era is modelled here but the idea is universal and any setting can be adopted . . .

By David Hunt

My interest in railway modelling, dormant since childhood days of Hornby-Dublo 3-rail laid out on the carpet, was rekindled some six years ago when my young son received an N gauge train set for his birthday (not from me I may add). After about six months I started thinking in terms of a permanent baseboard and asked a railway modelling colleague at work for some advice on the matter. I'm not really sure what happened next but I found myself a member of a model railway club and decided I ought to have something to run on the (4mm) layout then under construction. An advert for a Gem kit of a Midland Railway Johnson Class 3 caught my eye and I bought one. After I had hacked, glued and generally bullied the kit into submission I tried to find out a bit about the colour scheme and, as luck would have it, I saw some Midland models at the Easter 1975 MRC Exhibition in Central Hall. I asked the chap at the stand of HMRS, who advised of another HMRS member who could help me. Thus was born my interest in Midland locomotives, my subsequent membership of the HMRS (as far as I'm concerned a must for modellers who wish to achieve accuracy in their models), and a heap more trouble for my wife!

The outcome of all this to date is a veritable library on the Midland and early LMS, a houseful of modelling magazines and a workshop of steadily growing proportions culminating 12 months ago in the purchase of a Unimat. Among the by-products are seven Midland locomotives, a breakdown train and the layout described below. I also have some coaches and wagons for use on club layouts but they are not part of this story. Since that first Gem kit (afterwards sold) all my locomotives have been hand built following John Ahern's masterpiece *Miniature Locomotive Construction* (published by Argus Books).

The layout shown came into being for several reasons: I wanted somewhere to show my locomotives other than display cases; as I move house quite frequently due to my job



View along the layout shows the over-bridge (a good device this for breaking up the layout and making it appear bigger) and the breakdown train in its spur. Note locos waiting to enter and leave the coaling road, and the sand bunker (at right) where loco firemen fill locomotive sand boxes. Though self-contained as a layout in its own right, this sort of MPD could equally well be incorporated into a very large layout.

A Midland Motive Power Depot

a layout would have to be small, easily portable, and able to withstand a succession of removal firms; I wanted an excuse for having a lot of locomotives and a breakdown train on view without much else! The answer to all these requirements was an MPD (Midland, of course) containing a shed, coaling stage, turntable, etc. All the buildings could be removable leaving only the baseboards and track to the removal men.

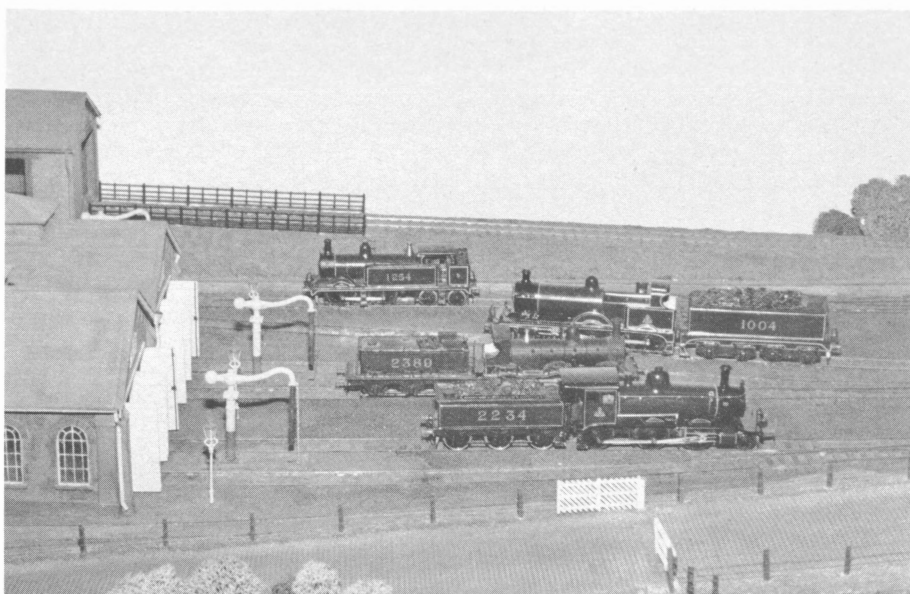
Baseboards

These were built of 2in x 1in timber framing supporting a 1/4in plywood top. There are two boards, each 5ft x 2ft6in, which are

held together with 1/2in coach bolts. The legs are braced 2in x 1in timber screwed into the frames and detachable for moving. The top surface of ply was covered in 1/2in insulation board; this was a mistake as I shall reveal later. The frames were built with cross pieces every 15in. This has proved adequate so far and very little sag is present in the length of the boards. All joints are screwed and glued using Resin W.

Trackwork

The track plan was drawn to fit the space available and the structures I had in mind.



A scene which effectively captures the more leisurely atmosphere of pre-grouping days when equipment was kept cleaner and more frequently painted than it is today. All is very trim in the four-road yard as the locomotives stand ready for the day's work. All are scratch-built, the nearest being one of MR's American-built Moguls, quite rarely seen in model form.

This is not exactly a prototypical way of doing things but I was pleased when the layout was displayed last year and an ex running shed superintendent in the audience said he wished he had had that track layout as it would have made life easier! I tried to get a Midland flavour into the track plan without modelling an actual MPD. The plain track is SMP Scaleway and the point-work is hand-built using SMP rail and sleeper strip. I used the SMP method of frog polarity switching but this has given some trouble and I would recommend separate switching. Turn-out operation is by the wire in tube method and there is sufficient friction in the system to obviate the need for positive locking. When I began the layout, I was a bit dubious about making my own turn-outs but after the first one I was able to produce a working item in a little over an evening. It's a lot easier than building a white metal kit and a complete unit costs something like 50p. The constructional advice given in SMP kits is sound (with the exception of the frog switching) and I have been using the track gauge I got with the first kit ever since. Buffer stops are a mixture of Mike's Models

MR type (for accuracy) and Peco (for speed as the exhibition date drew inexorably nearer!).

Turntable

The turntable well was cut into the insulation board (I would advise doing this before the top is attached to the frames — I did it the hard way. The well was then faced with brick embossed plastic card and a length of old rail soldered into nails pushed through the plywood every inch or so round the inside. The table was made from plastic card, a piece of SMP track was Araldited to the top with plastic card plating around and between the rails, and a 1/8in steel axle mounted in a brass block Araldited in the middle. Brass carrying wheels at each end run on the well rail. The axle goes through a brass bush mounted in the centre of the well and is driven by a mechanism that defies description but used to go 'tick-tock' and tell the time. Track alignment is purely by eye but as the clock, sorry, turntable revolves at about one rev per minute this isn't difficult. Track polarity is automatically reversed by wiping contacts under the table picking up

from two metal half discs around the axle. Handrails were soldered up from brass wire and Araldited into holes drilled in the table. The stonework around the well was added from thick card scribed to represent individual stones.

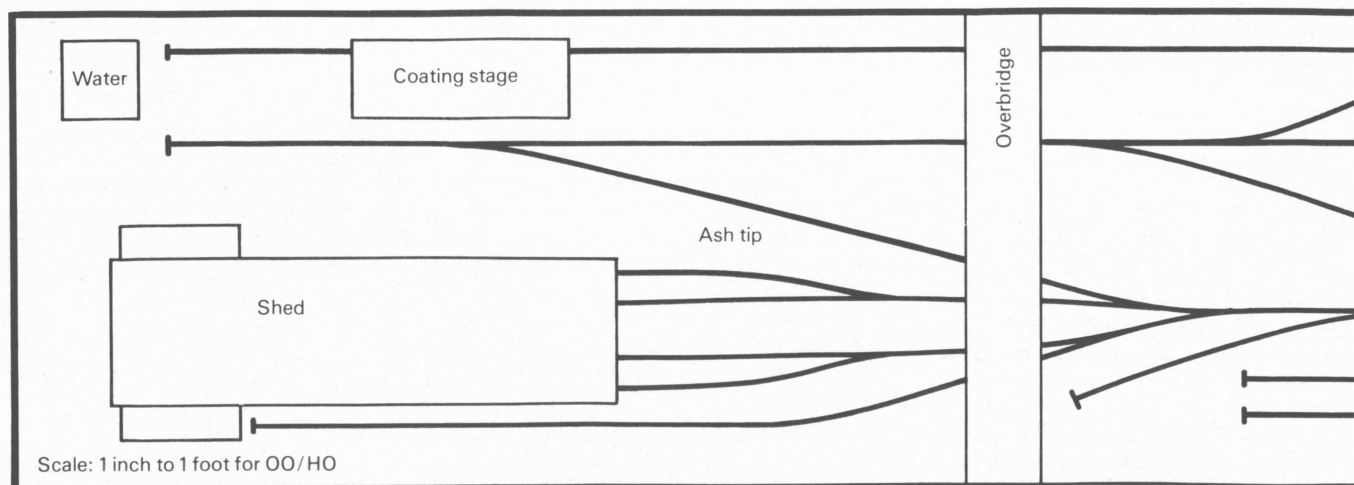
Ballasting

This operation taught me a few lessons. The basic idea is sound but beware of the pitfalls! As the layout represented an MPD, I wanted the ballasting and the spaces between the tracks to look like an earth, ash, railway gunge mix — so that's what I used. Cocoa tins full of soil and ash were dried out in the oven and then sieved. The sieved 'earth mix' was then spread on to the baseboards and brushed, poked and scraped into position between and around the tracks. The whole lot was then sprayed with diluted Resin W (about 8:1 water to glue) with a few drops of liquid detergent added to reduce the surface tension and stop the 'earth' from being gathered into little blobs. After about 48 hours the 'ground' was set hard. I then found that I had the first switchback MPD in existence! The water soaking into the insulation board had swelled it and in some places 1/4inch hills had appeared. The tale of the site levelling which followed is too long to go into but had I sealed the board with several coats of polyurethane paint before tracklaying the problem would not have arisen in the first place. A little forethought would also have prevented the next plague of glued-up turn-outs, but I'm told that half the fun is in rectifying one's mistakes. Next time I'll cover the operating bits before ballasting. Oil spillage, spilled coal, etc, was added using the real thing and weeds simulated by flock, carpet fibres and teased out sisal string dyed green.

Buildings

The coaling stage, water tower and road bridge were all built from 1/4inch square obechi frames overlayed with 1/8inch card and clad in brick embossed plastic card. The time consuming bit was mitring all the corners of the plastic card, especially the built up footings. The coaling stage roof was tiled using overlapping strips of paper suitably scored, and the water tank was made from card, plastic card cladding, and

Drawing below shows author's track plan for OO/HO. For a N scale version the plan is 2 inches to 1 foot, and for TT take 1 1/2 inches to 1 ft. A smaller shed would allow slight compression of overall length.

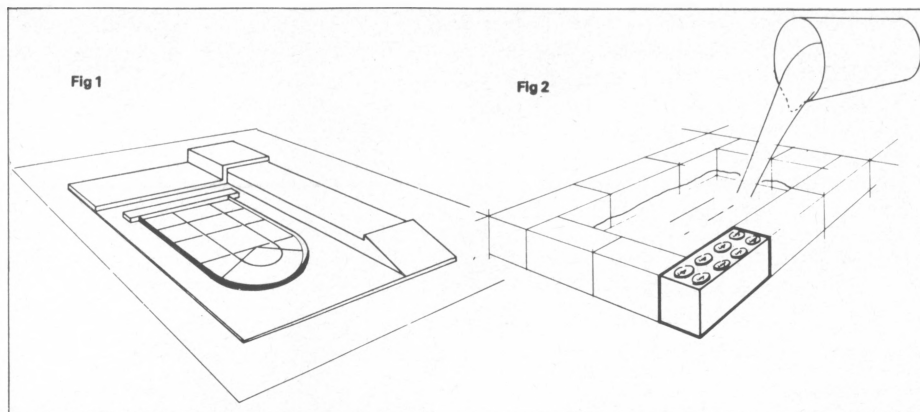
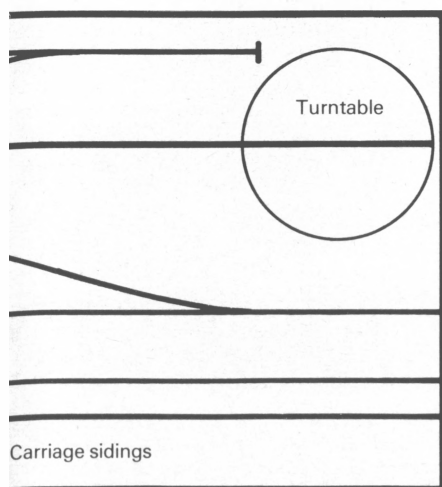


strip detailing. The chimney stacks are $\frac{3}{8}$ inch square balsa wood clad in embossed plastic card with drinking straw and fire cement chimney pots. The roadway over the bridge was covered in cobbled plastic card. The bridge parapets are strips of $\frac{1}{8}$ inch thick plastic cut from an airline food tray (there's a use for everything!) scribed for the individual stones. The coaling stage and water tower are based on West-houses — drawings for them appeared in the December 1973 *Railway Modeller*. Guttering was cut from plastic drinking straws and downpipes made from plastic sprue bent over a candle flame.

Loco shed

The shed is based on the one which used to stand at Hellfield before the end of steam in 1968. Drawings of the shed were obtained from BR at Euston and after surveying the expanse of brickwork and windows I nearly turned to stamp collecting. In the end I used the following method. A 'master' of one bay, ie, two windows and one buttress plus associated brickwork, was made on a plastic sheet base (see Fig 1) and a cold cure silicone rubber mould made from it. Suitable material is available from Alec Tiranti, 70 High St, Theale, Reading, Berks. A retaining wall of Lego bricks was build around the master and the rubber poured in (Fig 2). I then cast individual bays in clear resin (sold for making paperweights and incarcerating butterflies, etc) and Araldited them to a $\frac{1}{4}$ inch obechi frame to make the sides of the shed. I found that a wall thickness of about $\frac{1}{8}$ inch was sufficient. The ends of the shed, offices, workshops, etc, were then made as per the coaling stage and the whole lot assembled. After the roof framing was finished the clerestory and chimneys were again cast in units and glued to a sub-frame which was then added to the roof. The brickwork and window frames were then painted leaving the windows clear. This method is lengthy as each bay has to cure before the next one is cast but it has the advantage of ensuring that all the windows are the same and the only plastic card mitring involved is in the original master. The roof was built in the same way as the coaling stage but took much, much longer. Doors were made from scribed plastic card,

Note: If larger turntable is used, move cross-over under overbridge as coaling stage headshunt will be shorter.



guttering from Faller accessory packs and downpipes from plastic sprue bent to shape over a candle flame. Details such as down-pipe fixings, ridge tiles, etc, were made from various width paper strips.

Detailing

The water cranes and gas lamps are from the excellent Mikes Models range; fire buckets, bicycles, etc, by Merit. The fencing is cotton tied around matchsticks glued into holes in the scenery. The embankments for road and coaling stage were built up from card and obechi, covered in Polyfilla and 'grassed' using combinations of dyed surgical lint stuck fluffy side down and the backing ripped off, flock scatter material and Noch grass fibres. The whole lot was then covered in diluted Resin W to secure it. Gates are Slaters and notices by Tiny Signs stuck on to matchstick posts. I have yet to put lamps on the road. The ash pit was cut into the baseboard top, lined with brick plastic card and part filled with a mixture of ash and Resin W. The sand heap by the bridge was a piece of balsa curved to shape, covered in glue and dipped into diamond sand. It was then stuck to the baseboard, more sand sprinkled on and around it and diluted glue run over it.

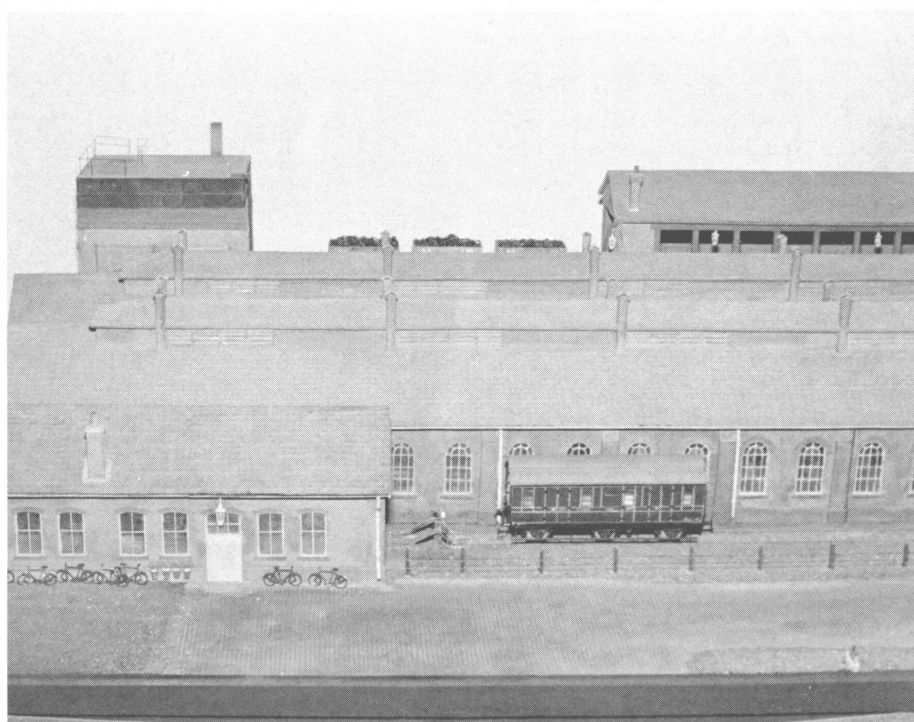
Electrics

The electrics are very simple. Power from a Scalespeed P16 is taken to the track via 18 Woolworth's on/off switches to provide isolating sections.

Locomotives and rolling stock

I have seven locomotives running on the layout; all are scratch-built using either K's or XO4 motors and Romford wheels. The exception to this is the Johnson single which has hand made driving and carrying wheels and Mike's Models 60:1 gears. Superstructures and tenders are brass and nickel-silver with the exception of the Deeley 0-4-0T which is entirely of plastic card. Boilers are invariably rolled by hand using tinplate from syrup or cocoa tins. All the methods used are pure Ahern. It speaks volumes for his book that my first attempt at scratch-building — a Johnson 0-4-0T — undertaken in a fit of enthusiasm and based on the ability to solder two pieces of electric wire together, should have been successful. Through my membership of the HMRS I have been able to build models of some less common prototypes as well as a few standards. The 4mm locomotives I have built so far are (in order of construction):

Johnson class 1P 0-4-4T



Down the side of the shed is a stores van. The engine yard entrance is off the public road in the foreground which is paved with setts as was common at the turn of the century. In those days workers arrived on foot or by bicycle, and Merit cycles provide the appropriate accessory to demonstrate this.

Kirtley outside frame 0-6-0

Deeley 0-6-4T 'Flatiron' as built (ie, unsuperheated and round top firebox)

Johnson Compound No 1004 as built with straight running plate, short cab and smokebox, bogie tender, etc.

Johnson 4-2-2 'Princess of Wales' class.

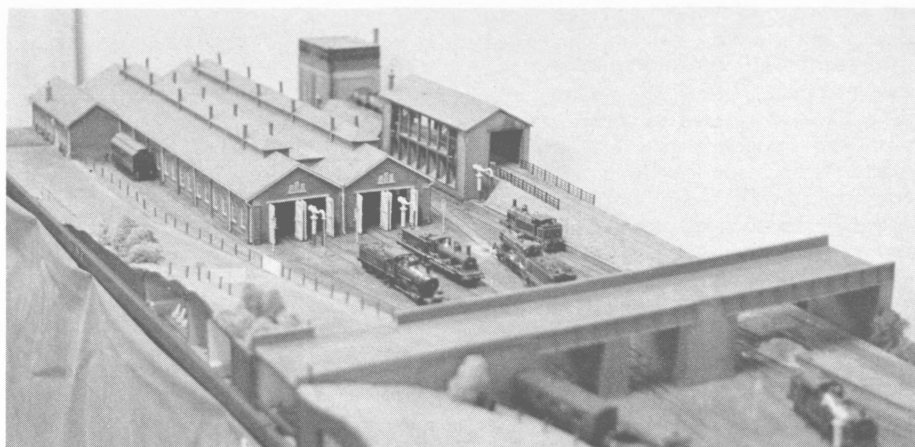
Schenectady 2-6-0. As far as I know this is the only 4mm model of one of these locomotives around. The prototype was one of a batch bought from America by the Midland during the locomotive famine in 1899, and is a typical American Mogul of the time adapted for British use.

Deeley 0-4-0T shunting locomotive.

The models are sprayed with red oxide car primer and three coats of Precision Paint's MR red through a Badger spray gun (not airbrush) which cost me £4 in 1975. Lining is done by ruling/brush painting thinned matt cream paint followed by a black Rotring Micronorm pen. The whole lot is then varnish sprayed to fix it. Tender or tankside numbers are Methfix transfers whereas buffer beam lettering and coats of arms are hand painted. The latter are now available from SMS and a start has been made on replacing the less satisfactory home made ones. Some of the locos have commercial buffers and chimneys and all have commercial couplings. Rolling stock consists of several coal wagons, both Midland and private owner, a 6-wheel stores van, a couple of brake vans and a breakdown train. The coal wagons are Slater's kits but the rest of the stock is hand built. The stores van was built using drawings of a Midland 31ft 6-wheel coach with reference to photographs to get the panelling right. It is constructed throughout from plastic card. The brake vans were made just before the Slater's kit became available — galling initially but extremely satisfying when they are mistaken for those kits. The breakdown train is really the subject of another article but suffice it to say that the crane was built from original works drawings. It would have been impossible to build it without a lot of help from various HMRS members and Mr. W. Moffatt of Cowans Seldon Ltd.

Conclusion

This layout represents my entire modelling output for over five years apart from a few coaches and wagons. All parts of it were developed simultaneously which, I found, kept me from getting fed up with any one aspect (apart from the shed roof, but that was a bit like tiling a cricket pitch). Mistakes were plenty but each provided a useful lesson. If I was starting it again I would make several changes as suggested in the text. I would also make it to S4 standards but at the time I knew no better (so to speak). Had I seen Heckmondwike or Pendlebury before I started, things would have been different. As it is, I have solved my inner 16.5/18.83 conflict by going to 7mm fine scale — I think that may be cowardice but it gives me some new horizons. I don't think I could face that shed roof twice the size though. The main lesson I have learned is that you can do things which seem impossible before you start if only you make that start. Six years ago I had no idea about



Everything in this overall view is scratch-built, locomotives, stock, buildings and track (from SMP components), though a very similar set-up could be built using ordinary flexible track and building kits for locomotive sheds suitably adapted. Much of the realism is achieved because no attempt has been made to cram in too much track and there is no compression of the shed which will stable a generous fleet of locomotives.

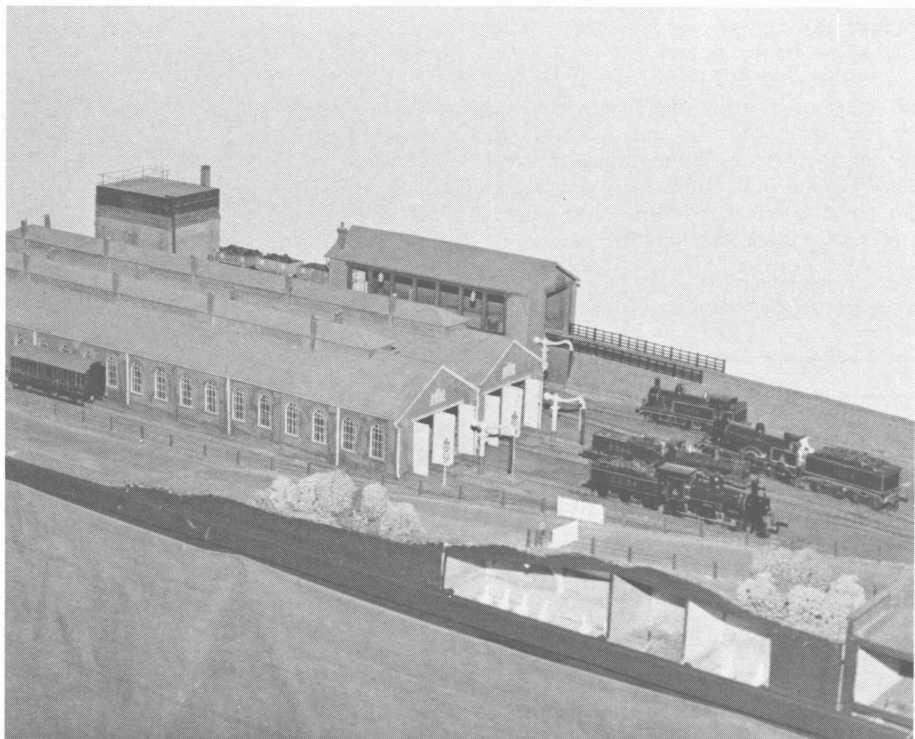
soldering, had never heard of piercing saws or pin vices and wouldn't have recognised a lathe if I'd fallen over one. I now have my MPD and collection of 4mm stock which I can say I made myself and that gives me a lot of satisfaction. As I said before I have now gone into 7mm scale locomotive construction and, like David Jenkinson, I find it more satisfying than 4mm.

Finally I would like to thank those people who have, knowingly or not, helped me in the construction of the layout; many HMRS members, especially Ralph Lacy and Peter Tatlow, for help with information on the breakdown train and Bill Ibbott with the locos; BR Euston for help with plans of the sheds and turntable; countless people who have written articles in the model railway press to inspire me and last but obviously not least my wife for typing this and giving me the kind of long suffering support

which I think only wives of railway modellers know.

Editor's note

While this layout is specifically modelled on the old Midland Railway as far as scenic finish, structures, and locomotives are concerned, you can, of course, follow the same layout idea and produce an entirely different MPD set up along similar lines to this one. There are numerous card and plastic engine shed kits available and ready-made turntables (like the Hornby one) or the Airfix turntable kit (see January/February 1980 issues). In other words, while the MPD layout described here is largely a hand-made effort (including track) there is nothing to stop anyone else making up a similar layout using ordinary ready-to-run type locomotives, stock, track, buildings and accessories.



Note how very neatly the track switches and turn-out levers are concealed under the hill, though very accessible. Coaling stage and storage roads still allow a fair amount of shunting of the rolling stock required to service a MPD, so that layout is by no means just a static diorama. Movement can be continuous with locos to turn and bring in and out.

The ballast business

Here's yet another way to ballast track demonstrated for **MODEL TRAINS.**

by *Ian Peterson*

Continuing our series we turn this month to another practical answer to the problem of representing ballast in miniature, this time representing the aggregate with nothing more complicated than sand which is set in position with adhesive. That sounds simple enough, and indeed it is, but as with all basic procedures there are a few tips which are worth noting, and above all a need to get the materials and work area organised before starting.

The tools and materials are quite straight forward being:

(1) Track pins — those in our photos are by Peco and we are assuming that the track is being laid on to a cork or softboard underlay. If not, then a more substantial pin may be necessary to tap lightly into a harder surface such as chipboard. In this case small panel pins will do the job. See page 603 November 1980 issue, for a demonstration of this.

(2) A small artists' paint brush.

(3) An eye-dropper. If this isn't to hand, a friend with laboratory connections will probably be able to help, or a dispensing chemist will sell them. A further possible source is in photographic processing supplies.

(4) A straight edge — a 12 inch rule will suffice, but the longer, the better, where long straight runs of track are planned.

(5) A saucer with a deep centre well, or alternatively an egg cup — a saucer is less likely to tip up or be knocked over.

(6) A pencil.

(7) Washing up liquid.

(8) Small measures — a teaspoon and dessert spoon are satisfactory.

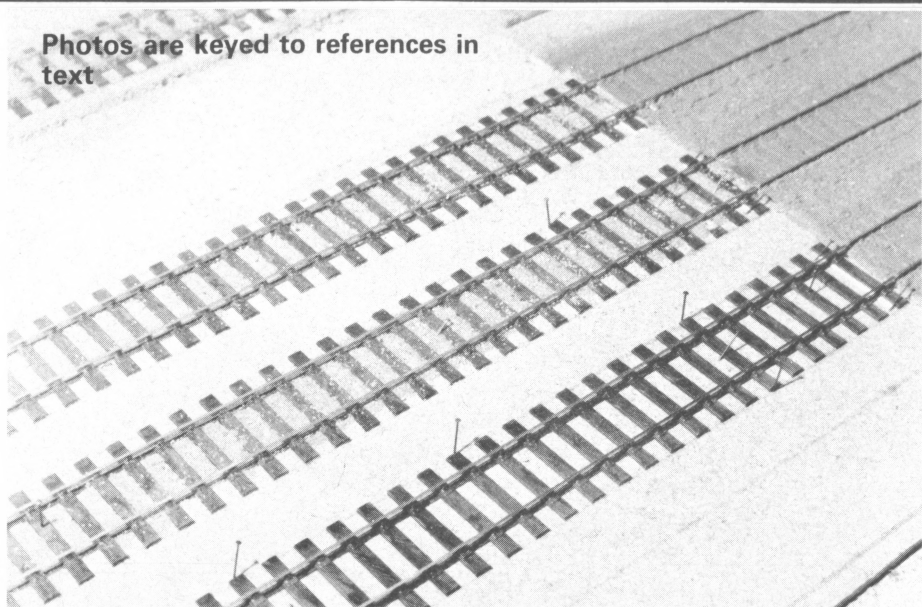
(9) White PVA glue — Resin Woodworking Adhesive — made by Evostick — is a well-known brand readily available. The smallest size will lay many yards of ballast.

(10) Sand

(11) Sieve

(12) A foil dish such as comes with meat pies.

Photos are keyed to references in text



1 Preparing the sand

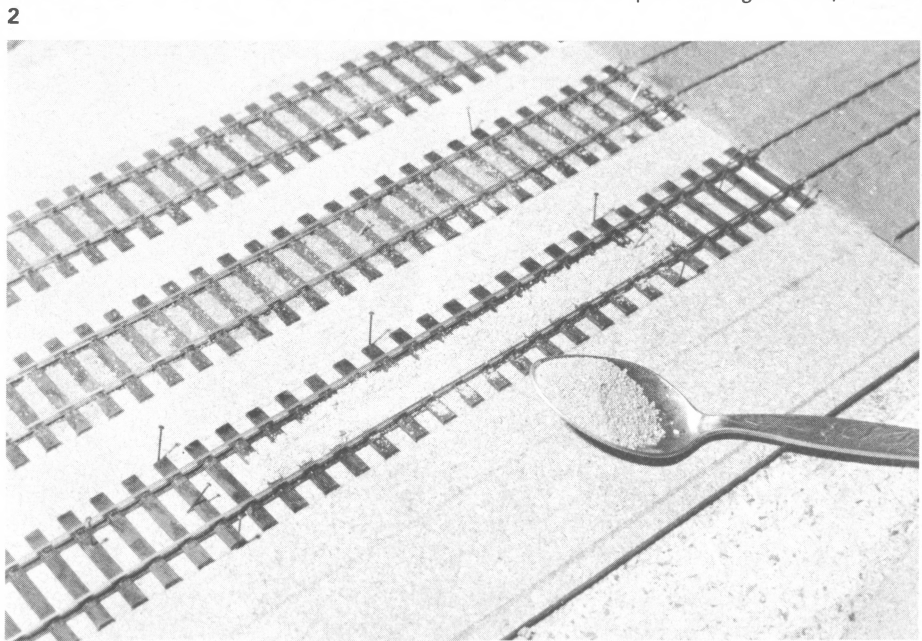
Fine sand is needed and it is wise to carry out a little work on it, hence the need for the sieve and foil dish. We haven't yet mentioned scale or the mesh size of the sieve, and obviously the two go hand-in-hand. In 4mm scale, a 3 inch ballast (75mm) would need a sand of 1mm grit size, and in 2mm scale, half of that. Have a look on the hardware shelves of your local supermarket and almost certainly you will find a selection of inexpensive small plastic rimmed sieves fitted with nylon mesh, intended for various kitchen duties such as flour sieving. If no suitable mesh for your scale (judge it by eye — 1mm or ½mm approximately) is there, then a good ironmongers is the next stop.

Now for the sand. If a neighbour isn't building a wall, no doubt you can think of other local sources — there's always a pile of sand somewhere and a bean can full will cover 'acres' of the model.

Some sand may be salty, and salt can cause later problems of corrosive and white deposits. Put the sand in a bowl and stand the bowl in the kitchen sink.

Run cold water into the bowl for 15 minutes gently (to avoid displacing the sand) and let the water overflow down the sink. Then drain off the surplus water and tip the sand out on to absorbent paper (newspaper will do). After the remaining water has soaked into the paper, transfer the sand to the foil dish and put it in the oven at between 100° and 125° centigrade for an hour. Remove from the oven with gloves, allow to cool, and rub through the sieve. Store in an airtight container or jar.

Draw the track outline on the underlay or base so that the lines correspond with the edge of the sleepers. Lay the track down and pin in position with the pins at the end of the sleepers to stop sideways movement and at a 45° angle over the centre of the sleepers to stop the track lifting. This is important at track ends. At baseboard joins the track must be adjusted for height, if necessary, to match the adjoining board, either by packing up with thin card or sanding the last 3 inches of underlay to reduce the height. When laying curves it is advisable to pin *through* every fourth



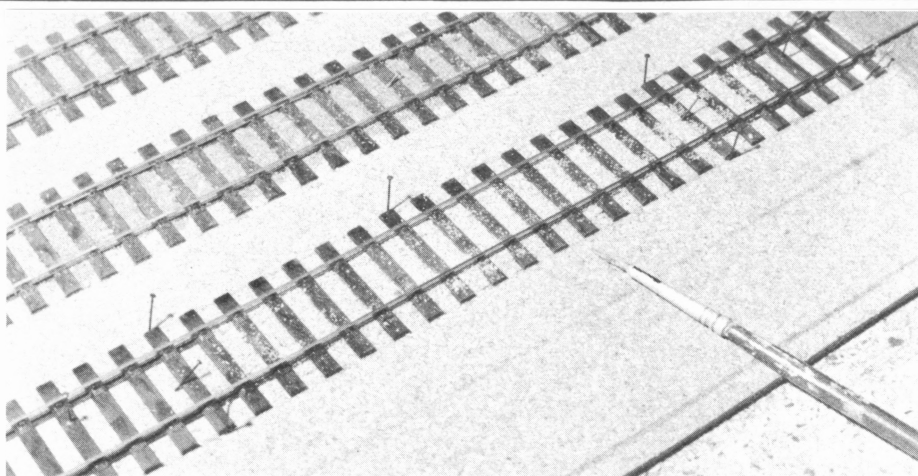
sleeper, drilling the sleepers first if holes are not provided by the track manufacturer.

Look at photo 1. Nearest to the camera can be seen the edge of the cork sheet cut square to receive a platform wall. If this edge had been 'open country', the cork would have been trimmed at 45° to form the ballast shoulder. Next are two pencil lines which mark the sleeper outline for a track which has not yet been laid. Then comes the track which has been positioned ready for ballasting. Note the pins at the edges and over the sleeper centres, and a pin through a hole drilled in a sleeper near the baseboard join. The end sleeper has been packed up because a slight height variation had been caused due to using two different brands of 1/8 inch cork sheet (there's a lesson worth remembering).

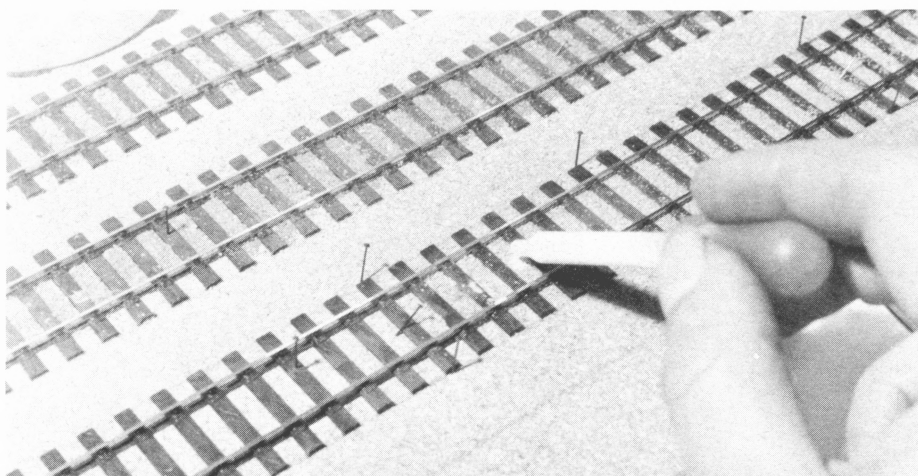
Also note that on the end sleeper, pins have been placed tightly over the ends to stop any lift. In photo 2, the prepared sand has been carefully laid in a slight heap along the centre of the track with the teaspoon and then spread in photo 3 with the small paintbrush. In this stage it is worth spending time to ensure that the sand is packed thoroughly between the sleepers and side web, and that it does not rise above the sleeper level. On fine track such as the SMP Scaleway shown, ballast above the sleepers will interfere with the wheel flanges and cause uneven running. Experience will develop a 'feel' for the amount of sand to be run off the teaspoon to just fill the spacings.

The adhesive can now be mixed. Pour a level dessert spoon of Resin W into the saucer, scraping the spoon contents out completely on to the saucer — a finger is just the right shape for this! Then add a level dessert spoon full of water and mix thoroughly by grinding round with the bowl of the spoon. Finally add three drops of washing up liquid (this is to reduce the surface tension so that the mix will spread through the sand by capillary action).

Using the dropper (photo 4) gently add two drops between each pair of sleepers (one drop near each end). The technique comes easily, and if the dropper tip is touched against each sleeper whilst the drop is being



3



4

expelled the adhesive quickly spreads. Practice makes perfect. Check that turn-but mechanisms are moving freely before the adhesive sets. Allow the ballast to set overnight and then similarly lay sand between the tracks and apply adhesive to form the '6 foot way', as in photo 5 between the two centre tracks. When the whole area is dry, remove the pins.

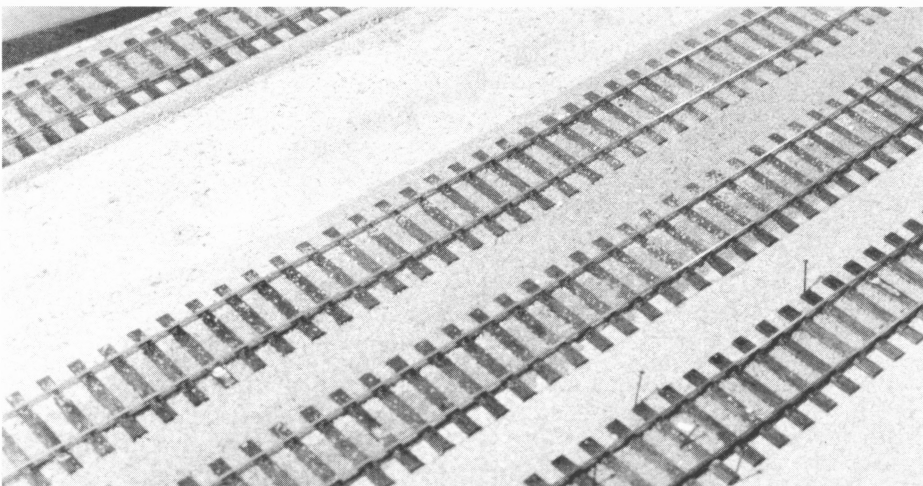
Occasionally small bubbles may be formed from the dropper and these can leave unsightly pock marks if left to dry. To avoid this, whilst the adhesive is still wet, take a pinch of sand between thumb and forefinger and sprinkle very thinly on to the bubbles (which will burst) and fill the pock marks.

The adhesive dries clear and the remaining stage is to lightly brush the surface with a soft dry 1/2 inch paintbrush, and vacuum up any loose sand which could otherwise cause damage to motor gears. Recheck the turnout mechanisms and see that no grains of sand are between the blades.

We finished off by standing the board on edge and spraying from a basic airbrush overall with a matt medium grey (Humbrol 67) and quickly wiping off the rail surface. Then we masked the 6 foot way with strips of newspaper held by pieces of self adhesive labels and sprayed track colour (Humbrol HS 125) at a low angle on to the track from both sides again wiping the rail surface. Near turn-outs, we place small (1/4 inch square) pieces of self-adhesive labels over the electrical spring contacts before spraying.

A sprayed baseboard can be seen in the top right hand corner of some of the photos. Remember to make a note of the colour used if adjacent boards are sprayed at different times, so that continuity is obtained.

This method of rusting the rail bed is suitable for the steam age where the continuous drop of steam condensate caused the rust colour to spread between the rails, but for the modern era it perhaps looks more correct to spray overall with grey (darkness depending on ballast type and age) and to rust only the rail sides using a small brush.



5

Close up on the Class 37

Last issue we covered the modelling aspects of the Class 37 but pointed out that detail variations were considerable. You really need to choose a particular locomotive and follow its particular features when you get to work on the Hornby model. Space for prototype pictures was limited last time, so here we present some further views of members of the class showing some of the points to watch.

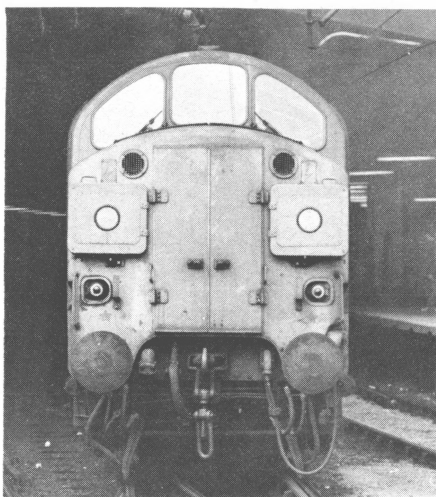


Above: In May 1980, 37192 was carrying mini snowploughs and the extra headlight for service on lines in Central Wales.

Below: On August 10, 1980, 37045 was at Doncaster works with the headcode boxes freshly plated over. The large side grille outer panel is removed, showing the framing beneath.



Above: Back in April 1962, D6736 (now 37036) was brand new from Vulcan Foundry, awaiting acceptance trials at Doncaster. Note gloss green and yellow finish, 'silver' buffer heads, and polished rims to the horn apertures. Also polished cab handrails and plain metal kick plate below door.



Left: 37004 portrays the early nose layout, with doors now welded up and code boxes sheeted in to show marker lights only. Steam heat is removed, leaving only the socket for the pipe on the buffer beam.

Below: A contrast in front ends in April 1980. At Newport, 37253 at the platform has three noughts (instead of four) in the headcode box, while 37257, running west with empty coal hoppers, has the more usual two 'dots', plus two extra lamp irons.



Pictures from the files of John Chalcraft

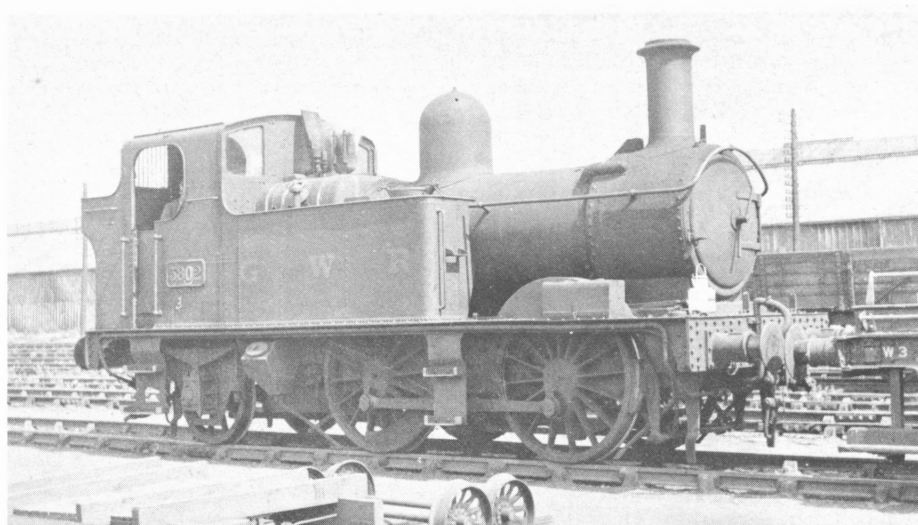


Above: At Bodmin Road, Cornwall, on August 17, 1980 37142 (right), with round buffers, replaces 37084 which has 'cross-eyed' marker lights, oval buffers, and the name ADA stuck in the centre window.

Left: The latest nose style is shown on 37231 in May 1980 at Westbury. Headcode box is plated in and the bottom line of the panelling is almost straightened out.

When Airfix introduced their 00 gauge, 4mm scale, 14XX class 0-4-2T just a few years ago, they set quite a standard for small ready-to-run locomotive models which is hard to beat. Indeed, not many European HO models have detail which even includes sand pipes running close to the wheel rim. Lots of modellers have obviously been taken by the charms of this little GWR branch line locomotive and it is just right for a small layout. There were always more GWR enthusiasts than any others, and Airfix must have added to the numbers by producing such a pleasant model.

Having bought yourself such a well-detailed model, you may be inclined to put the model on the track and think it the end of the matter. I've seen a lot of these models running on layouts, but I



Above: The model was converted to the 58XX variant of the standard GWR 0-4-2T which was identical to the 14XX type except that it lacked the motor-control equipment and so could not propel auto-train trailers. 58XX locos were used on branches where trailers were not necessary to traffic—even if a trailer was used the locomotive ran around it at the terminus for the return journey. As this adds to the fun of operating a small layout, the 58XX conversion is an attractive idea. This is 5802 at Swindon in June 1949, still in rather grimy GWR finish. The safety valve cover is missing and the footplate tool boxes are set forward on the splashers, a feature which seems common to all 5800 locos (N.E.Preedy).

From 1400 to 5800

Chris Ellis rings the changes on the Airfix 0-4-2T model — easy for beginners

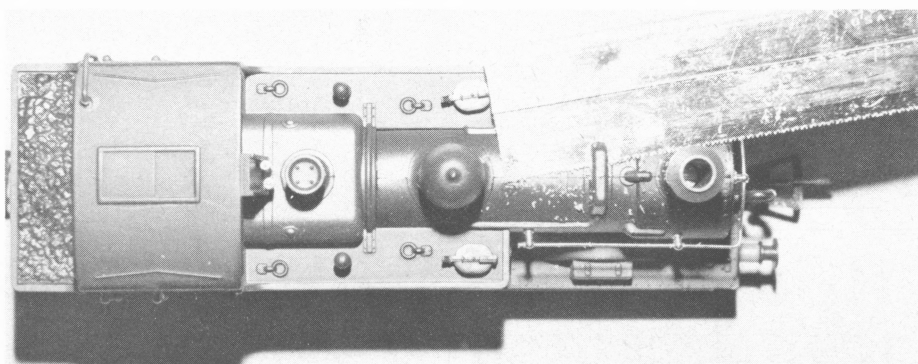
haven't seen many which have had any further attention lavished on them, save, perhaps, for the addition of etched brass number plates. But why not spend an evening or two playing around a little with the basic model? Believe it or not, but it can be changed quite a bit in the way of detail and appearance, and the pictures here show what I did, with some mention of other optional changes.

First of all, the model as produced by Airfix represents the final form of the class, a notable feature being the addition of top-feed to the boiler which was a mainly post-war addition. The number and finish of the Airfix GWR version, indicates the 1946-47 period, the last years before nationalisation, and pictorial evidence suggests that more members of the class lacked top-feed than had it fitted—the feature started to come in on GWR locomotives from the late war period. Some locos lacked top-feed to the very end of their lives, so a major change I made was to remove it from the model.

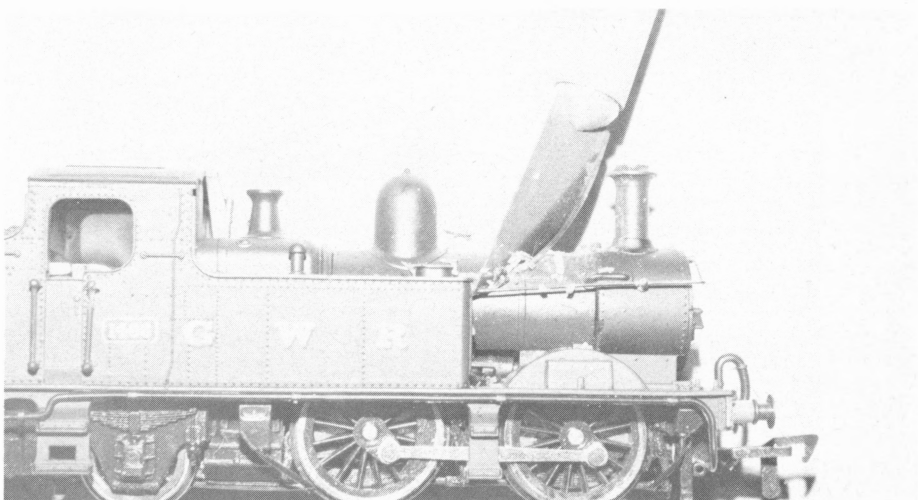
As with all conversion and detail work, however, it is essential to get together as much visual reference material as you can and, if possible, select an actual loco and base your work on that particular machine, for detail differences were many. *Collett & Hawksworth Locomotives* published by Ian Allan Ltd is a key reference work, but these engines are illustrated in many other books and articles, and some further pictures are included here. The work itself is very easy—you need just a razor-saw, a sharp craft knife, a fine file or emery board, and a few odds and ends. A beginner could tackle this easily as a first attempt at

altering a commercial model, the only real skill necessary being a steady hand while cutting!

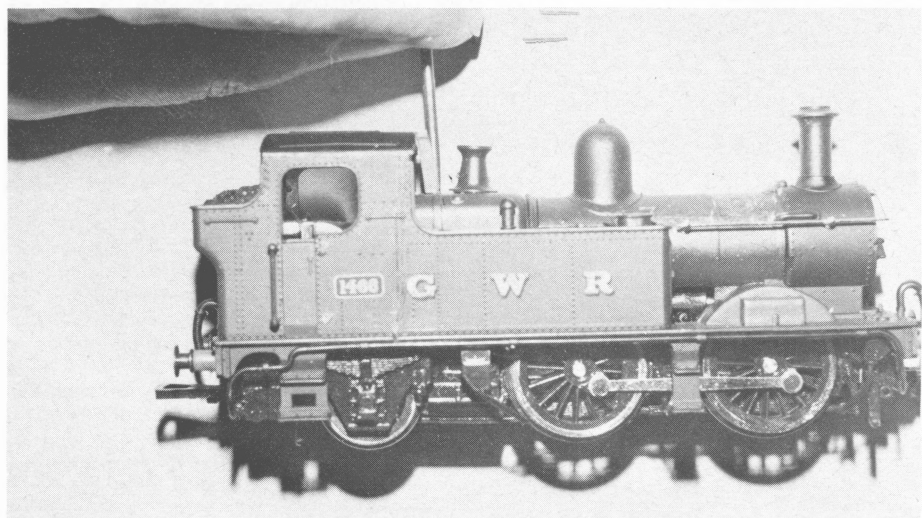
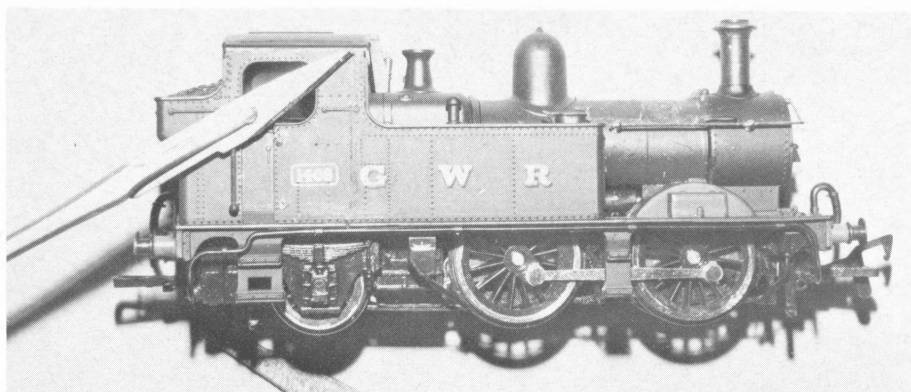
Picture sequence starts here



Above and below: Fairly drastic (but careful) butchery is needed to remove the top-feed. Use a razor-saw to cut off the main part, and then gently carve away the piping to give a perfectly smooth boiler. Note that the rear handrail knobs can be removed to give you more room for working the knife. Use a fine emery board to smooth down the plastic and take care not to damage the boiler bands. Also rub down the faint mould line along the boiler top.

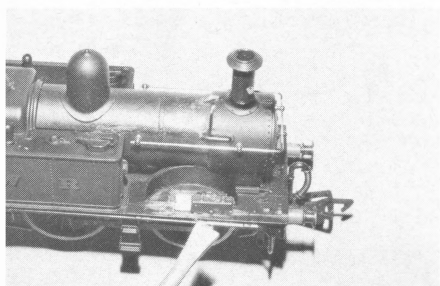


Right: The electric wiring on the cab side was a late feature not found on 5800s or early 1400s. Use a knife to scrape it off. The cab handrails got knocked off the model while doing this and they were put to one side for cementing back in place when all other work was finished. If you want an early 1400 without top-feed this completes the main work on the model. For more changes, however, read on.

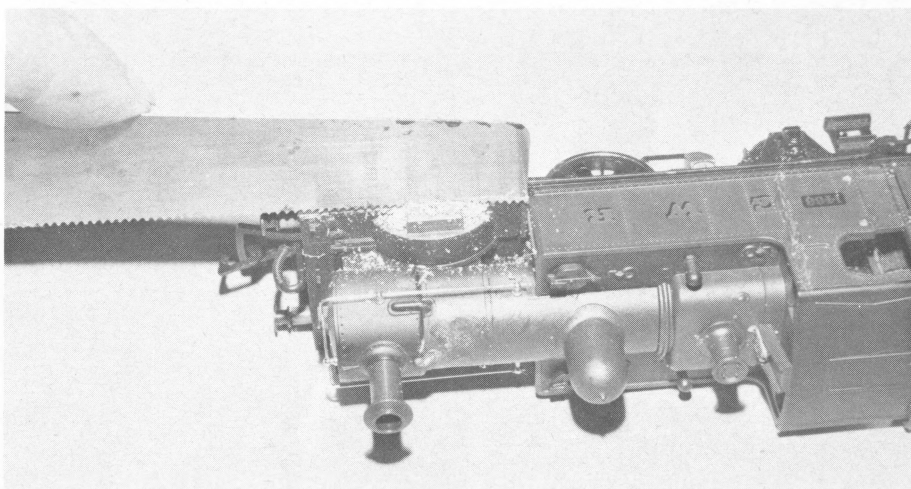


Left: You may find the whistles poorly fitted. They should be set quite deep (see heading photo), so remove the brass fittings, drill out the mounting holes with a hand drill or thick pin, and cement the whistles back in place with the right hand one set a little higher than the other. Also check the safety-valve cover. If it is loose or crooked (as here), clean it up and glue it back in position. Also check the tank filler hatches and glue them in place straight.

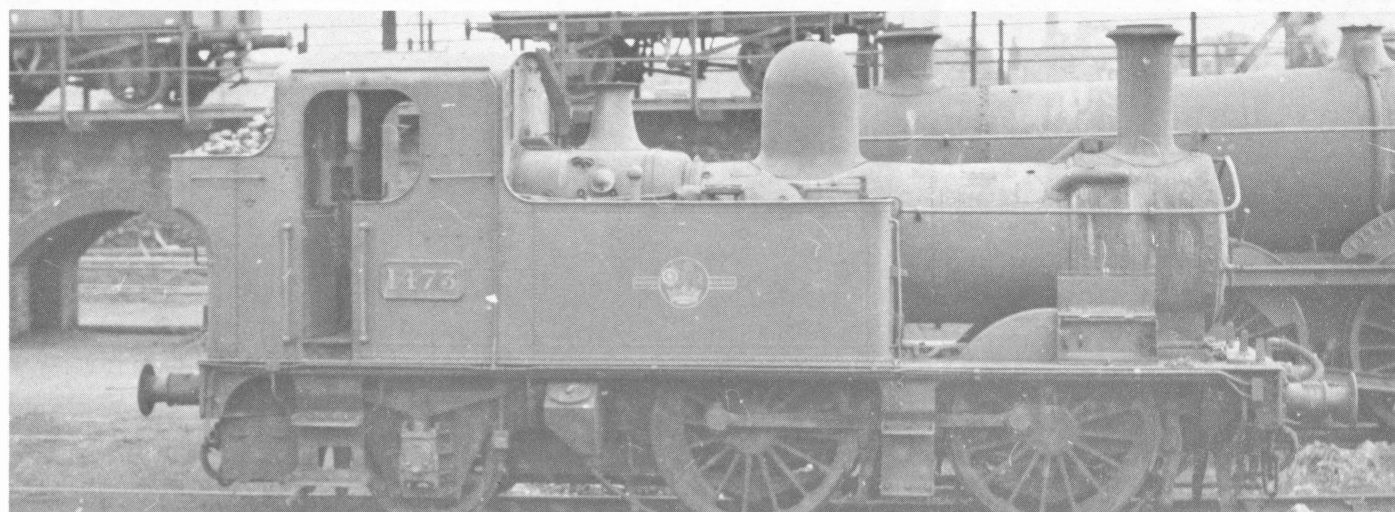
Below: On most 5800 locomotives and a good many 1400s, the tool boxes by the splashers were set further forward. This makes quite a visual change. If you want to do this, use a razor-saw to cut away the box mouldings, taking great care not to cut into the footplate. Don't rush these cutting jobs.



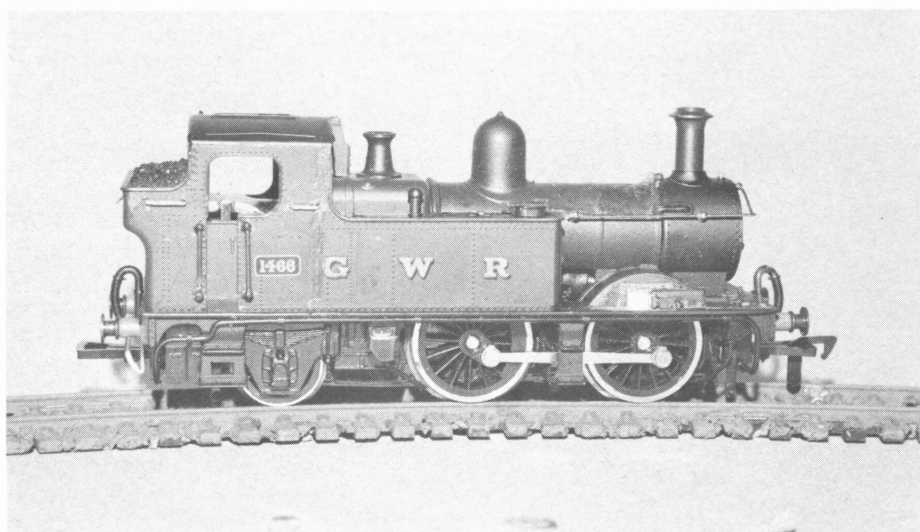
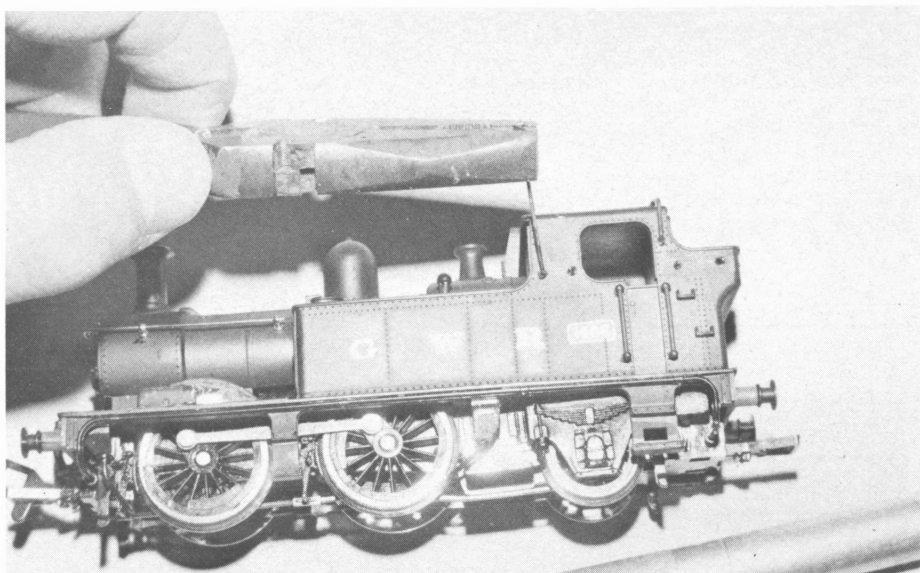
Above: With the tool boxes removed a hole appears in the splashers and footplate. Cut small rectangles of 20thou plastic card and trim them to fit exactly into the holes, flush with the outer surfaces. The tool box mouldings are cleaned up and then glued back into position set forward so that the front edge lines up with the front end of the splashers.



Below: No 1473 at Tyesley in 1961 is in lined BR green finish. It lacks the top-feed and had the tool boxes set forward (with the lid open). This loco has the motor-control gear on the forward buffer beam and cables leading to it run along the footplate valance. Note extensive staining on the smokebox (A.J.North).

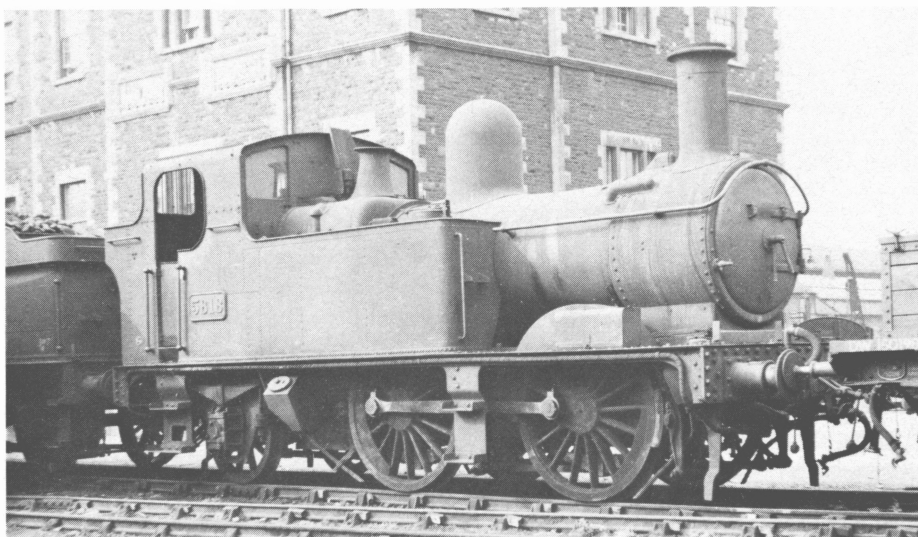
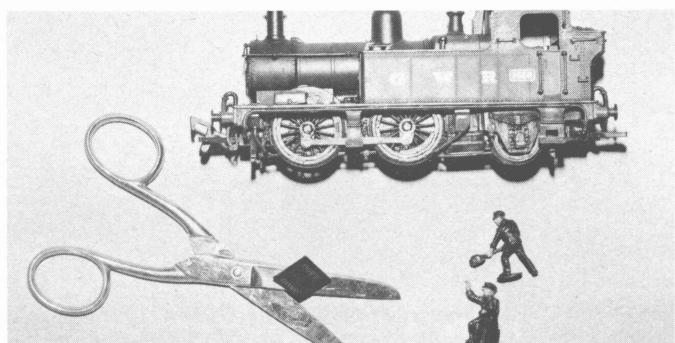
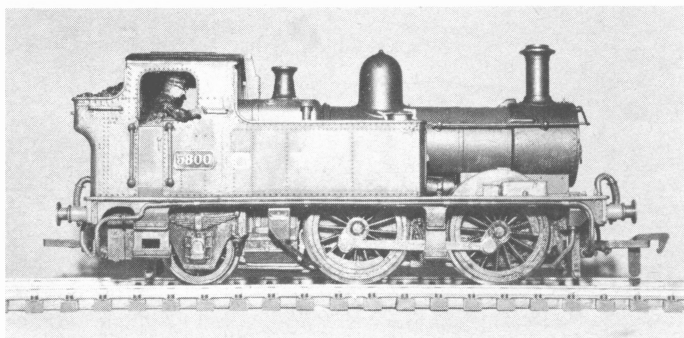


Right: A further optional change is to remove all the moulded plastic handrails and replace them with real wire. For this model ordinary Bambi staples are just the right size. Scrape off the moulded representations from bunker end and cab side. Then use either a fine pin-drill or a hot pin (as here) to pierce out holes to take the staples. A pin prick of plastic cement put into each hole will hold the staples in place. For the forward horizontal rail it is necessary to trim the staple shorter and bend it to fit, matching the length to the original moulding. Also pierce out a hole in front of the chimney. Insert a small length of staple to depict a lamp iron. On the footplate these are already moulded. Finally cut off the moulded smokebox door handle, then cut a Bambi staple in half and cement the two halves into a hole drilled in the middle of the smokebox door. Optionally remove the bunker steps and handrail (left side) but pictorial evidence suggest that some locos, at least, had these fittings in late GWR days.



Left: Here is the model with all the changes, cleaned up and ready for painting. Note that heat pipes are now added below each buffer beam on the opposite side of the coupling to the brake pipe. These can be made from lengths of guitar 'G' string bent to shape as detailed in previous articles, or you can use commercial items as here. Glue them into a notch cut into the bottom of the buffer beam. For the 5800 version cut away the motor-control box and pipes moulded on the rear buffer beam, leaving it plain.

Below, left: Another view of the model. On most locomotives of the class the steam pipe under the right side of the footplate ran straight to the rear of the steps; the Airfix model has a kink in it here. You could try changing it, but as this is a rather vulnerable bit of detail it is better to leave it as supplied. It probably changed over the years as locomotives were shopped.

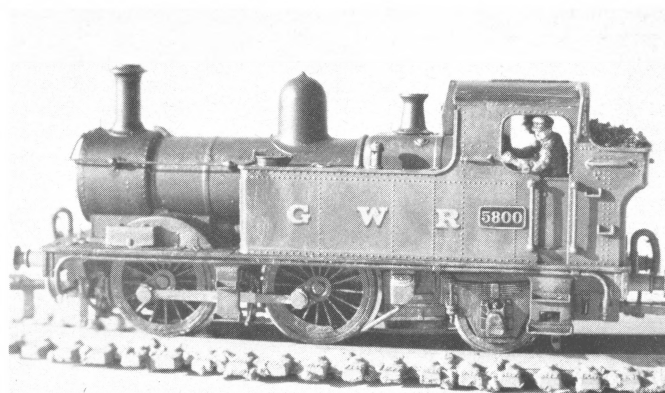
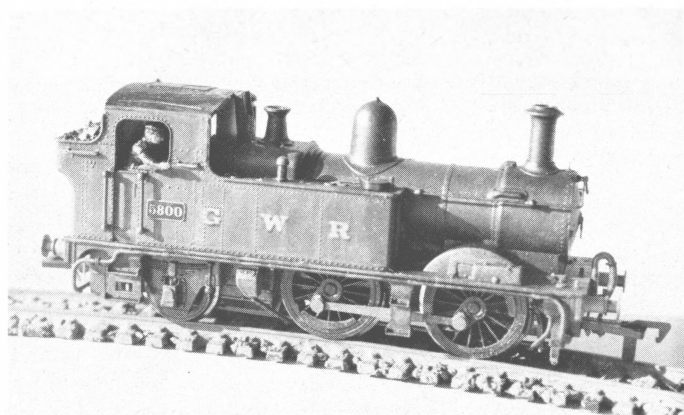


Above: Here is the model after painting. Unless you wish to change the livery completely it is only necessary to touch up. Humbrol Dirty Black and Gloy GWR Green are perfect matches to the original. Paint the wheel rims and centres black, and darken the coupling rods with a mix of black and brown. Now cut out the etched brass number plates with small scissors. Crew figures here are from Hornby items and have been suitably painted, though others are available. Kings Cross Models, York Way, London N1 can supply a big selection of 5800 and 1400 plates at 55p per set.

Left: No 5818 in 1960, with smokebox number removed (you can see the brackets) and BR totem either omitted or obscured by grime. Note the pattern of 'runs' on the smokebox and boiler sides. Note also the painted handrails—they should also be painted on the model (P.J. Sharpe).

Right: No 1472 in 1961 is in very dirty lined green BR livery, with forward set tool boxes and motor-control gear on front buffer beam instead of rear buffer beam. This could be reproduced on the model, but note associated leads and rodding passing over the side tanks, down the front, and on to the forward end of the footplate—could be duplicated in miniature with fuse wire. Note also lack of top-feed (A.J.North).

Below: Two views of the finished model after painting. The two crew men are glued on to the inside of the cab. Make some test runs to ensure they do not foul the motor. It was necessary to remove the fireman's shovel and the driver's left arm and seat to get them to fit. The arms were gently bent to new positions. Number plates are glued over the originals using a thin layer of Five Minute Epoxy. Smears of this on the finger tip are applied to the roof and tank sides to give 'wet look' dribbles and condensation.



Bookshelf

NEW BOOKS FOR MODELLERS.

Victorian Locomotives, by D. Baxter. £4.95. **Scenes from the Midland & Great Northern Joint Railway**, by Ronald H. Clark. £4.95. **Moorland Publishing Co**, PO Box 2, Ashbourne, Derbyshire.

Ancient glass negatives donated from company records to the Manchester MRS form the basis for the fine pictures in the book on Victorian locomotives. Virtually all major railways in Britain in the last 50 years of the last century have locos portrayed in this book mostly with crews and cleaners posing proudly with their charges in the manner of the day. The captions are informatively done and overall the book offers a nice nostalgic wallow in the past. We feel some of the sharp prints could have been reproduced better than the printers actually managed it, but this is a minor quibble about an interesting book. The M & GN was one of those small East Anglian rural affairs which ran to such places as Great Yarmouth and Kings Lynn. It was closed in 1959, even before Dr Beeching to to

grips with remote routes. Little of it remains today. However, words and pictures bring it all back to life and the album-style book will be of interest to those seeking references on East Anglian branches for modelling purposes.

Internationaler Modell-Eisenbahn-Katalog, Bd 2(TT + N + Z), edited by B. Stein. Published by Symposium, Essingen, West Germany. In UK from Albion Scott Ltd, 51 York Road, Brentford, Middx. £9.95. **Tyco Model Railroad Manual**, by Robert Schleicher, Chilton Book Co, Radnor, Pa, USA. In UK from Albion Scott Ltd, 51 York Road, Brentford, Middx. £5.95.

In 1978 Symposium of West Germany published an English/French/German language illustrated guide, in colour throughout covering 00/H0 model locos and stock available in ready-to-run form. Now they repeat this interesting exercise doing in 200 or so pages of illustrations and data a complete coverage of N/TT/Z models currently in production. Aside from the occasional lapse or misprint in

the English translation the book is extremely well done, like a giant catalogue. A few models which are really kits (such as the Peco saddle tanks) get into the book as well. So you have a valuable single volume reference work, as up-to-date as can be, which will be particularly useful if you model overseas railways, for you can see exactly what is theoretically available. Whether or not you can actually track them down is another matter.

Tyco (now calling itself by its other name, Mantua) is a sort of Hornby of America, though its range of ready-to-run models is not so extensive as Hornby's, nor so widely available. Obviously this means that their manual is Tyco (or Mantua) orientated as far as pictures go, but the material presented is excellent. It doesn't state anything startlingly new but it gives a practical down-to-earth guide to starting and building a layout. If you have a particular interest in American models this is an informative introduction to the subject even if you never own Tyco-Mantua products. The actual ideas are applicable to all models.

Making Model Trucks, by Gerald Scarborough. Patrick Stephens Ltd. Bar Hill, Cambridge, CB3 8EL. £7.50.

Our 'Roadscene' contributor Gerald Scarborough comes in here with a very practical guide to kit building, modelling from scratch, and converting all types of

Continued on page 93

Trainlines

LETTERS TO THE EDITOR.

Scrapyard locos

I was very interested in your photograph in the February 1980 issue, of the locomotive *Manston* at Barry Scrapyard, South Wales. As it happens, I have modelled several Airfix loco kits on such engines that can be seen at Barry, or those that have since been delivered to preservation sites, and I enclose several photographs that you may find interesting. My models show:

34105 4-6-2 WV *Swanage*

Now at the Mid-Hants Rly.

76017 2-6-0 Now at the Mid-Hants Rly.

92240 2-10-0 Now at the Bluebell Rly.

Many of the locos at Barry have been stripped of parts for spares for other preserved engines and some locos that are there now have parts missing such as chimneys, smoke deflectors, buffers, and in addition much boiler cladding is missing. In some cases tenders have disappeared.

The models that I have are mostly whole, with the exception of coupling rods, and are suitable inscribed with preservation graffiti. I always take out plastic moulded coal from the tender and then make a sloping coal space from plastic card.

Painting a 'derelict' model is far more difficult to represent than one might imagine. To take a brush and slosh on brownish paint often results in total

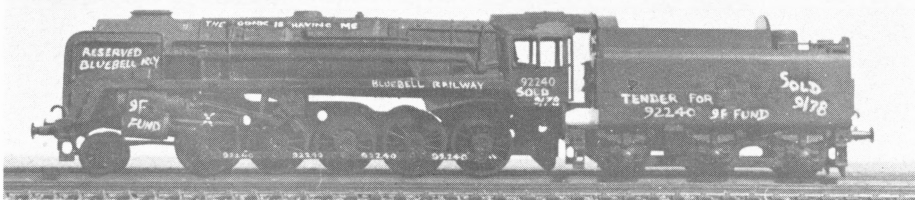
Letters and photographs from readers published in *Model Trains* entitle the sender to a free Airfix kit from Series 1, 2, or 3, or a free Airfix four-wheel wagon model. This applies to each item published, and is subject to availability. We welcome comments and ideas for publication but reserve the right to shorten letters for space reasons. While we cannot guarantee answers to individuals, any letter or query anticipating a reply should include a SAE (or IRC if sent from outside Great Britain). Notices of exhibitions and similar events will be published free provided that the copy is received in publishable form and in time to meet our press dates (allow 10 weeks) for publication before the event.

failure.

I appreciate that 92240 went to the Bluebell Railway was without a tender and that 76017 never arrived at the Mid-Hants Railway straight from Barry, but did arrive partially restored from Quainton Road. I am very pleased with the appearance of my models and I have tried to produce 92240 with the exact graffiti it carried on the day that it arrived on Bluebell rails. The inscription 'The Gonk Is Having Me' obviously has special meaning to Bluebell staff.

Peter J. Jones, Bromley, Kent.

As the photos show (this page), there is quite an art in reproducing actual scrapyard locomotives. Editor.



More Deltics

Your article on detailing Lima Deltics was very interesting. I wish it had come just before I did some super-detailing on my son's pair of these models instead of just after, but not to worry...

One or two points which were not mentioned might be of interest. The data panels can be obtained as water slide decals, and if used with Hobbsco fluid and a semi-matt paint finish look quite good. To be strictly accurate, if a current locomotive condition is sought, the front of the trio of cab side windows on each side should be filled in. This quite simply done with Britfix Model Filler and a modelling knife, and really does make a difference. I made my headcode box panel lights out of Letraset, too, though I do not claim to have been the first by any means. However, it is possible to do this modification without having to paint the insides of the lamps by hand. If the black surround is applied in the form of an upper-case letter 'O' from Letraset sheet number 145, and then filled in by applying a white Letraset dot (from one of the many suitable sheets of white lettering in the larger type faces) — a full-stop or the dot from a lower-case letter 'i' — the job is done without the need for delicate brush work. Black upper-case 'Q' letters will do, too, to save wasting them, providing the tail of the Q is gently removed with a sharp knife. Black dots from the 'Decorative Borders' sheet are also the right size, but these have a carrier film which has to be broken between each dot.

The black 'O' system can also be used to convert illuminated head-codes to illuminated pairs of lights. The black paint should be carefully scraped off the white plastic headcode plate as supplied (eg, as on the Hornby Class 25), and the black 'O' symbols applied as described above. Then the rest of the panel is simply painted black around the two light rims. The headcode lights will then shine very realistically through the resulting circles of plain white plastic — much more so than through clear plastic card.

Lastly (back to the Lima Deltics), I found that leaving the 006 as per manufacturer's finish, and adding 55 to make a current style fleet number, resulted in two quite obviously different type faces, ie, old and new style lettering, which doesn't really mix. The sheets of dry print lettering supplied by Kings Cross are ideal for the latest style of lettering, and I strongly recommend a completely new cab side fleet number for that last detail on a first class model.

Mervyn Banks, Hull, Yorks.

Underground wanted

It would seem from various surveys that only two in every thousand modellers wants London Underground in N gauge. I am desperate for a layout of this type. Any plans, conversions, ideas, or help

Continued on page 89

Any mention of the Southern Railway always brings to mind the lack of ready-to-run locomotives and rolling stock for this very interesting company, as recent readers' letters have commented. What *do* we have? Well the Airfix GMR Schools is eagerly awaited but there seems to be little else to this standard in the pipeline at the time of writing; 1981 may bring more. The chance of obtaining a super detail, ready-to-run M7, would surely be something to look forward to! Triang/Hornby and Wrenn, have made several stabs at the Southern market but the results have not yet been up to the standard of modern models by such firms as Airfix, Mainline and Lima.

For a pre-war Southern layout, both the old M7 and *Sir Dinadan* from the Hornby series had some severe shortcomings, though they are capable of looking greatly improved after careful surgery, and this is not always an easy task for the inexperienced modeller. The Wrenn Class R1 0-6-0T loco, of SECR vintage is quite a nice little model, but again some surgery is required. The same firm's 'West Country' Pacific in rebuilt form is a nice model, but it brings us forward to BR days, not the Southern Railway proper. Wrenn's recent contribution to the Southern electric field, with the 'Brighton Belle' set is very much in the right direction in pre-war terms, but is a little limited in its use.

When it comes to it, even the rest of the electric field is hardly supported by the ready-to-run manufacturers, when there must be several pre-war express and suburban sets which would make a very useful contribution to this very important model requirement. We really *need* some *ordinary* express and suburban electric stock.

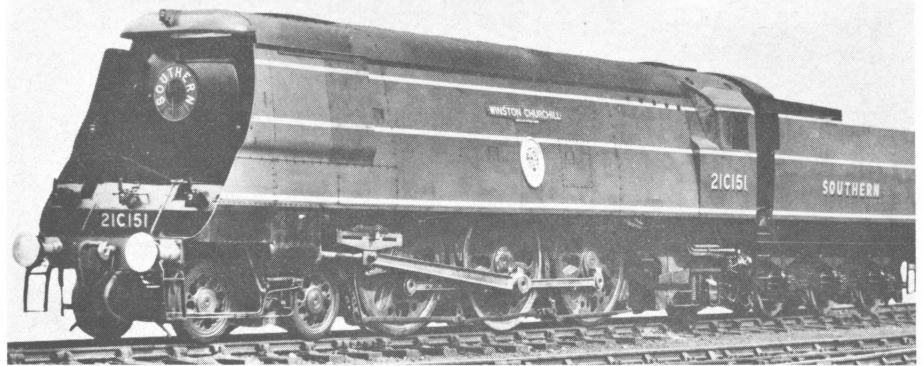
The kit manufacturers have done their best to produce a good selection of Southern locomotive power, and many 'steam age' and electric coaches are also available, but commendable as this may be, the Southern is still an untapped market as far as sales are concerned, and until some enterprising ready-to-run manufacturer is prepared to put up a first class model of early Southern steam power, we shall not really have any idea of just how big this market could be. If Great Western branch line models sell, then Southern branch line models might sell equally well, and as any moderate GW modellers will tell you, wherever the Great Western was to be found south of a line from London to the Bristol Channel, the Southern was not far away, and countless modellers have stated an interest in layouts having a GW/SR joint configuration and flavour.

Southern colour problems

Letters from kit-building Southern modellers, trying to sort out the various greens are on the increase, and one of the difficulties seems to be that even where enthusiasts have collected pre-

A Question of Colour?

Ian Huntley caters for Southern enthusiasts with a first look at the complicated subject of Southern Railway green — it varied greatly!



The original official SR photo of Winston Churchill, 21C151, portrays the new post-war image of the Southern Railway — Bulleid's light Pacific type with the post-war Malachite Green finish and 'sunshine' lettering, all very bright and clean, and with the new numbering system.

war colour measurements, even the *same* greens have shown variations in colour depending upon their length of service. For LSWR modellers there were fewer problems, and the SECR and LBSC schemes were fairly well defined, but as soon as grouping took place, and a common livery was evolved, the matter appeared to become complicated.

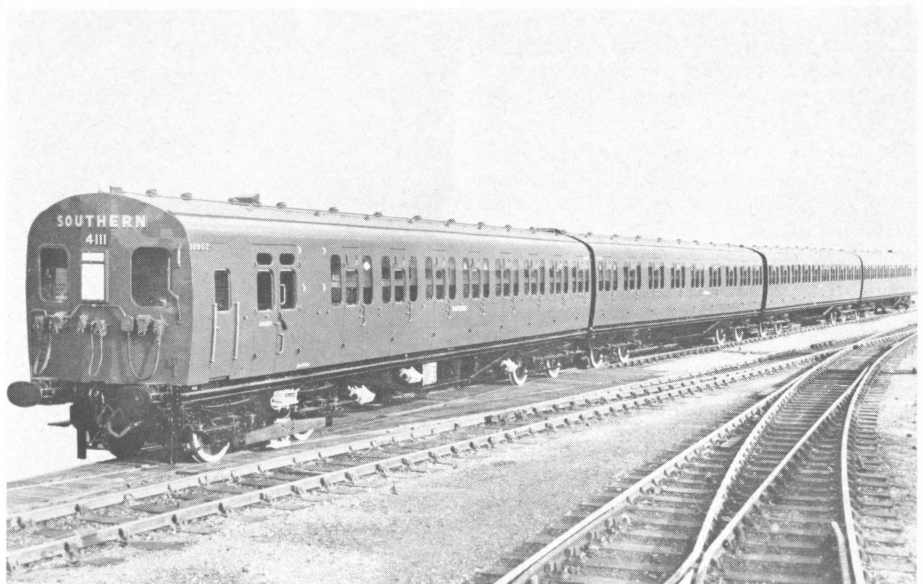
LSWR Electric sets

When the new three-car suburban electric sets commenced running on October 25, 1915, they had a brand new 'Green' livery. Commuters from Wimbledon and East Putney to Waterloo found the green to be a bright yellow-green adapted by R.W. Urie from an experimental coach green by his predecessor D. Drummond. In the

Methuen scale this appears to be about 28 (E-F) 8 or so.

The new colour was voted rather popular by environmentalists, and after the war ended some thought was given to having a trial of the same green on one of the Bournemouth express steam sets. During the summer of 1920 the trial took place and at the start of the summer of 1921, some more express sets were painted out in the green, with gilt shaded lettering and yellow lining. The following summer the new green became the standard livery for all new steam train sets (as well as any electric sets), and all other sets were to receive the colour as they went through the works for overhaul.

The steam locomotive colour of the LSWR had been Urie's Light Yellow-Green (or Sage Green).

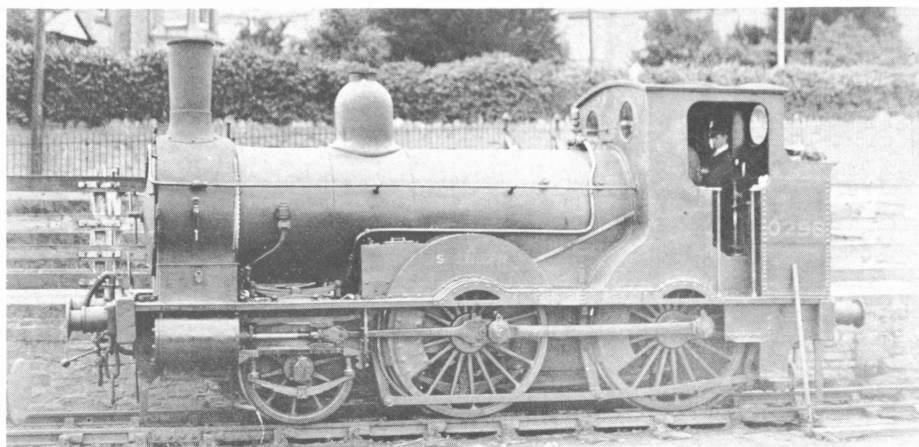


The 4-SUB unit when new was probably in Olive Green in the 1940s, though the 'sunshine' lettering is applied. This official SR picture shows white tyres, probably applied for the photograph.

Colour changes at Grouping

In July 1923 the new Southern board commenced a livery investigation, and painted a number of coaches from each of the regions, in various forms of 'Green', 'Royal Blue', 'Crimson Lake' and 'Indian Red'. Loco colours were restricted to 'Greens', and eventually in February 1924 it was announced that all three lines in the group would be changing to a new standard livery. Passenger locos and mixed traffic engines would have a 'Sage Green' livery picked out with Black and Yellow lining. Goods engines were to be Black with Olive Green lining. All coaching stock was to use Olive Green, with Black and Gilt lining.

The 'Sage Green' was similar, if not identical to Urie's Light Yellow-Green



This pre-war view of a Beattie well tank is interesting as it appears to show an unlined green finish, with smokebox and cylinders in black from the tone of the print — despite the fact that this is a goods engine. Can anyone tell us more? (P. Ransome-Wallis).



This 1939 picture shows 'Schools' class Hurstpierpoint in the new brighter green (freshly painted) with the new style 'sunshine' lettering including number on cab side (P. Ransome-Wallis).

and was of the order of 1E (5-8) in hue. Maunsell, who had been experimenting in the SECR with several Olive Green finishes, chose a Light Olive Green for the coaching stock, being something slightly darker than 29F8 (not to be confused with Sage Green).

Although the changes had been authorised for all locos and coaching stock, it was to be several years later before a significant colour change was apparent to travellers, and by 1925 changes in the loco colouring were made. After some brief trials the passenger loco colouring went to Light Olive Green. When freshly painted and varnished, this colour looked somewhat darker and a shade more blue, than coaches which had seen nearly two years service.

The loco colour thus was nearer to 28F8, than 29F8, and it was a year or so before the new loco green became a common sight. Colourings between 1929 and 1932 began to vary slightly as shortages due to economic depression took effect, and many repainted items appeared in much darker and more Blue-Green finishes.

In an effort to overcome this a darker and richer Olive Green was introduced early in 1932 but in spite of standardisation, slight regional differences in the green continued. When new and freshly varnished the Dark Olive Green was very rich and was around 28 (F-G) 8. When the varnish had dulled a little its brilliance dropped to around 28F5.

Jubilee year

Although special attention was paid to

express stock during 1935, no special paint schemes were evolved, but a report was made up from all the sections on the general variations in livery. Considerable variation in hue was noted, particularly in South London suburban electric stock made up from ex-LBSC and SECR steam stock. Bournemouth and Portsmouth stock and that of the West of England expresses generally presented a pleasant Olive Green appearance, though Dover and Brighton stock varied from Olive Green to Blue Green.

Steam locomotives with Light or Dark Olive Green varied from a good finish to a poor one as might be expected, and it was felt that perhaps the 'Olive' era had gone on long enough. The colour incidentally included not only the boiler casing, firebox and cab, but also the footplate valance, smoke deflectors and cylinder casing, as well as the wheels.

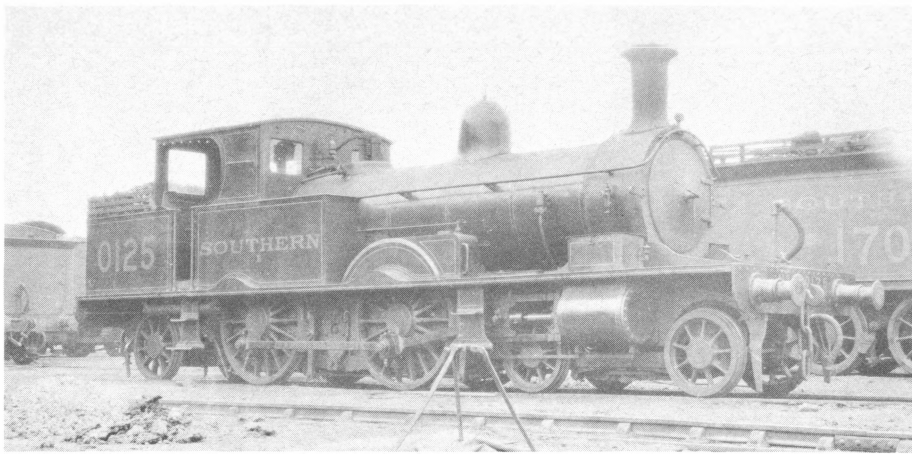
Thus at the end of 1935, Maunsell tried a new 'Brunswick' type of green. Nearer to a Middle Chrome Green it presented a much brighter appearance and was near to 27 (E-F) 8, and a number of locos and coaching sets were changed to this colour.

Bulleid takes over

Towards the latter part of 1937, O.V. Bulleid became CME and shortly introduced a much darker green finish on a number of rebuilt locomotives as a trial. The actual shade appeared to be around (26027)F8, which tended to



Class R1 0-4-4T in the early 1930s shows to perfection the standard Olive Green finish, fully lined out, and the standard lettering style which went with it (P. Ransome-Wallis)



Adams 'Radial' 0125 (later 3124) in the Olive Green livery, but with number divorced from 'Southern' lettering because of the small side tanks. Behind is the tender of K114-0, No 170 showing the more usual relative position of the number (P. Ransome-Wallis).

make drab Olive Green stock look distinctly muddy. Feeling that was not the real answer Bulleid examined many other green pigments until one from Germany was found. A bright Yellow Green with fairly stable hue, it was called Malachite Green, and was possibly what 28E9 would have been on the Methuen Scale. Used with Chrome Yellow lettering and lining it gave coaching stock a tremendous visual boost, and first appeared about March 1938.

By May, so much applause had been received that a number of passenger and mixed traffic engines were converted to the new colours, which led a few more months later to the adoption of the livery for all crack express locos and coaching stock.

The change continued into 1939, when it seemed that a third of the express traffic was in Malachite Green, with the remainder still in various forms of Olive Green. With the possibility of a war once again taking place, the Southern Railway procured a substantial stock of the new pigment for anticipated use on both new loco and carriage designs, and during mid 1939 evolved a new block form of outlined lettering for the word 'Southern'.

War and post-war

During 1941 the first of the new 'Merchant Navy' class streamlined locos emerged in the new Malachite finish, as did matching coaching stock, though other less fortunate stock was



By contrast to the view on the previous page, here is Hurstpierpoint in the earlier Olive Green finish showing number painted on the tender, the older lettering style, and small brass number plate on cab side.

finished in Olive Green or Black. When peace came the Southern was still in half Malachite and half Olive Green. Electric stock had remained in the Olive Green, but before any decisions could be made as to how the use of Malachite would be expanded, it was discovered that precisely the same pigments could not easily be obtained. After trying various combinations of pigment, it was decided to utilise some synthetic pigments, which produced a brilliant emerald green of some depth of hue. Again this is off the published Methuen

scale and would approximate 27B10 or so. This new colour began to appear on express traffic during 1946, and its use for steam locos and coaching stock continued up until nationalisation at the end of 1947. The restored Isle of Wight 02 (featured on the January 1980 cover) portrays Bulleid's Malachite finish was introduced for steam; a new deep Blue-Green was introduced for electric stock. A 'Spruce Green' somewhat similar to Bulleid's pre-war loco trial colour, it is near to 27F8, though the green ought to have a little more brilliance than the Methuen book can show.

Colour references are from The Methuen Handbook of Colour by A. Kornerub and J. H. Wanscher, published by Methuen & Co., 11 New Felter Lane, London EC4.

Summary and model paint matches

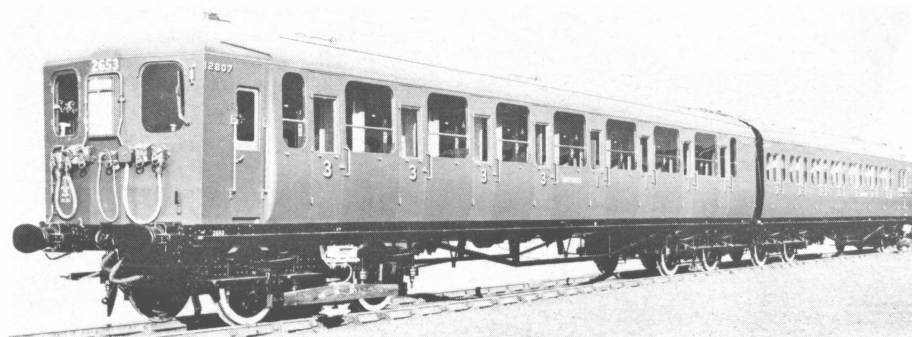
From this it can be seen that from 1925 to 1936 the Southern was substantially 'Olive', which can be matched by Gloy R219, for an average colour. By adding a spot of R221 Malachite Green to the Olive, the fresher, new colour can be achieved.

The earlier Light Olive, or Sage Green is given in R220, and the 1935/36 Dark Blue-Green can be matched by using R233.

The 'Pre-war Malachite Green' can be matched using R221, whilst the 'Post-war Malachite Green' can be matched with Gloy STG 18 Foliage Green, though the colour requires a little matting down to be equal with the surface finish of the authentic range.

Thus from 1938 to 1946, a mixture of 'Olive', and 'Pre-war, and 'Post-war' Malachite Green, could be seen with the darker 'Blue Green' coming in again briefly for the electric stock.

Add to this the slight variations between Greens of the same type, and models of the Southern Railway can be particularly striking, with quite a wide variety of green finishes depending upon the time scale.



Official SR photo of 1939 shows a new 2-HAL set in the new blocked style 'sunshine' lettering, and Olive Green finish. Note white tyres, white jumper cables, black underframe and buffer beam.

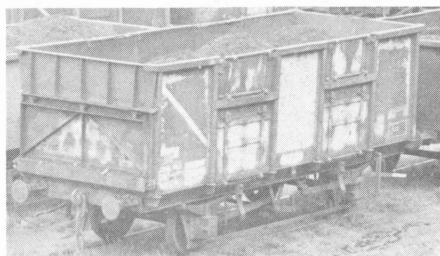
body panels should be cut from the remainder of the sides and fixed in place (NB, the outer sections are, like the doors, fixed to the edge of the floor, but the centre section should be shortened to fit on top of the floor). On my model I then cut a piece of plastic card which I fixed behind the sides as reinforcement.

Door stops were made from the curved portions of the couplings provided with Airfix kits, which I never use but which I never throw away. The curved portion should be cut off and then trimmed to an even width. Before fitting, small pieces of plastic card were fixed to the solebars so as to bring the channel flush with the edge. The stops were then fitted — you will now find out why the brake levers have to be made as flush as possible with the solebar.

Buffers and couplings complete the body. However, no coal wagon is complete without coal. I took one of the mineral wagon inserts and cut it across the middle. I then cut out a piece from the middle of a second insert and fitted it between the parts of the first. I didn't worry too much about an exact fit, because then I covered the surface with epoxy adhesive and spread crushed coal (nothing like the real thing!) over it. Don't fix my inserts — it gives me the option of full or empty wagons by fitting or removing the coal as necessary.

There is only one controversy and that is the one concerning the colour of GWR loco coal wagons. However, one thing is agreed — that grey wagons had grey underframes and black wagons black (many ready-to-run grey models have incorrect black underframes). I plumped for black. You can of course sidestep the issue and build this model as a revenue wagon, which everybody agrees was grey. In any event, lettering was white, as was the brake lever handle.

The resulting wagon gives you another very typical vehicle of the GWR, at very low cost. Agreed, the alternative ready-to-run models are available, but this project was a very handy way of using up left-overs from previous experiments which might otherwise be wasted. If the idea of painting it GWR upsets you, make it either very mucky or paint it in private owner colours as a PO wagon from one of the commercial wagon builders who also produced some wagons generally similar to the model.



As will be evident from this view, the BR 24 1/2 ton wagon has slightly higher sides than the 16 ton wagon seen adjacent. Therefore to be strictly accurate, you would need to heighten the Airfix 16 tonner sides, though this would make the model more difficult (all prototype photos by Dave Larkin).

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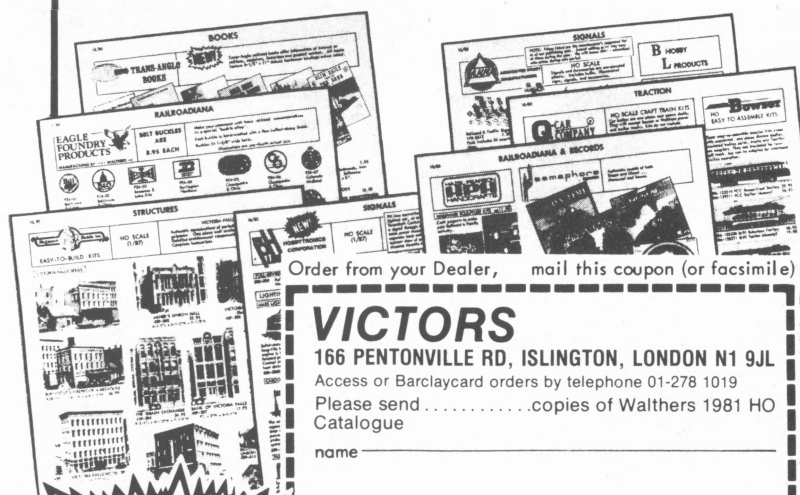
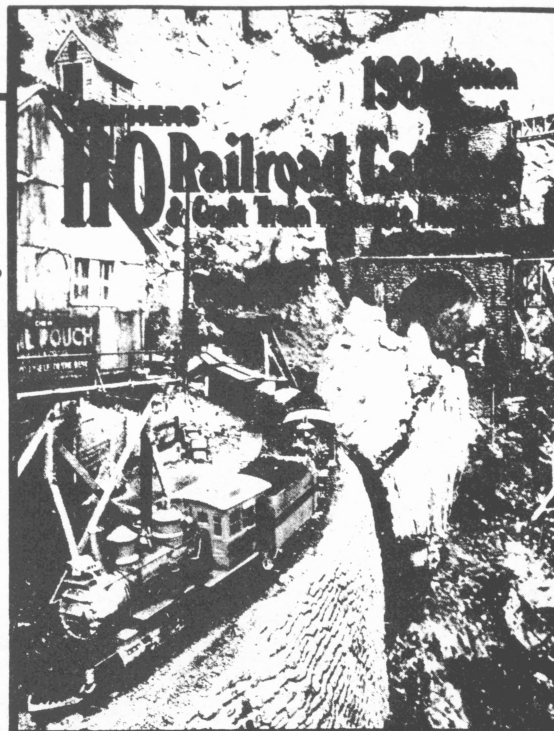
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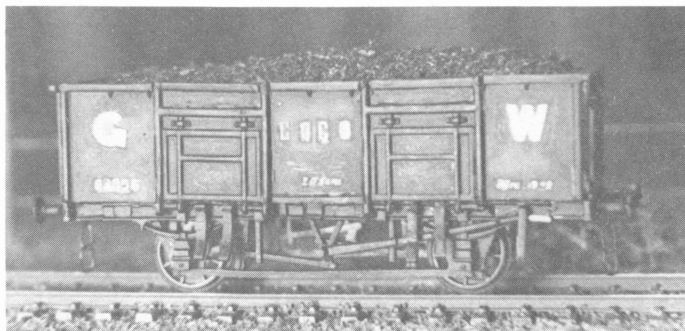
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Above and foot of page: Andy Brocklebank's model posing as a slightly freelance GWR 20 ton wagon. Right: A BR standard wagon repaired with welded patches on the side and marked as having a short weight load. Top left: This example has the side doors removed and the apertures plated in — marked 'No Doors'. Top right: Recent BR marking style on a very rusty wagon.

Make a 24½ ton open wagon

Andy Brocklebank uses up the left-overs from previous models to make an economical model from the pieces.

Readers who have reacted to some of my previous articles and built a GWR shunter's truck, an APOC twin-tank wagon and a GWR 24 ton 8-wheeled Toad will find that they have, among their left-overs, two mineral wagon bodies and a cattle wagon underframe. Budget-minded people should now pay attention, because I now intend to tell you, politely, what to do with these parts.

The GWR ran a large number of 20 ton steel-bodied coal wagons, built to several different diagrams and this model, though not strictly accurate to a particular prototype, is typical of them. The Airfix model recently released is an accurate replica of just one of the designs. My model is really 'freelance' but in the style of the GWR type and it looks remarkably

authentic in a train. Also it costs next to nothing to build! Even more accurately the model closely resembles the BR pattern of 24½ ton steel wagon, 'big brother' of the standard 16 ton item, though nothing like as common. A few of these BR 24½ tonners can still be seen in service — look for them in coal yards. The markings are the same as for 16 tonners but the number range is B280000 to at least B282769. So though my model is fictionally marked for GWR service, it would be even more appropriate to make this model as a BR wagon.

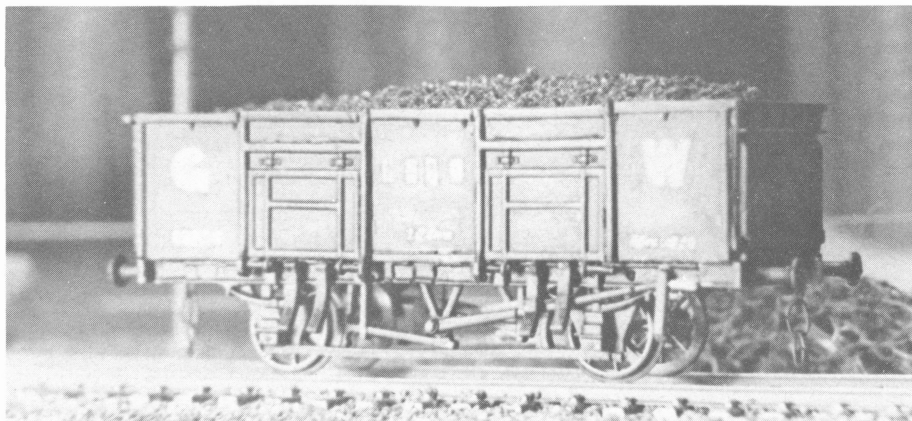
Construction

To start with, the cattle wagon floor has to be extended to 86mm in length by adding 7mm to each end. Then take

the axlebox/solebar assemblies and cut the tie-bars off under the axleboxes and place to one side. Cut the solebar in the centre and insert an additional piece of solebar 4mm long, which extends the wheelbase from 11ft to 12ft. Fix the buffer beams under the floor, then locate the axlebox/solebar assemblies to the floor exactly in the middle (to ensure that the axles are exactly lined up). Then insert pieces of solebar to fill the gaps. Replace the tie bars, and use plastic card to fill the gaps at the ends.

Insert the brake assemblies under the floor — I fitted mine without adjusting the length as the difference is fairly minimal. The brake handle, however, needs some modification. Firstly, I cut the lever in two and inserted a piece of Microstrip, of the appropriate dimensions, so that the handle end was in the right position when fitted, as in the photograph. The piece which represents the pin-down arm (there's got to be a technical term, but it escapes me!) should be cut down to minimum thickness (or maximum thinness, if you prefer!) so as to fit as flush as possible. This can be further aided by cutting down the raised edge of the solebar, if you see what I mean. There is a very good reason for this, as you will find when you get round to fitting the door stops.

The brake levers can now be fitted in place and we can now proceed to the body. End pieces (one fixed, one opening, as per the mineral wagon) can be fitted as they are. Taking the sides, first remove the details from the top panel of four doors (if you compare the kit parts with the photograph, you will see what I mean). A piece of Microstrip should now be inserted across the top of each door to represent the ribs. Now cut out the door pieces. If you look at the cattle wagon floor, you will see that there is a wider section in the middle. The doors should be fixed to the edge of the floor, either side of this wider portion. The three (per side)



Simple vintage lorries



A 1926 Sentinel starting out on the HCV London to Brighton run. Battersea Park, May 6th, 1979. (Photo: Terry A. Brown.)

Airfix military truck kits can be quite extensively but easily altered to make specific types of pre-war lorry, says Derek Church

The Airfix Matador lorry has become a firm favourite on railway layouts and whilst it is an excellent kit it is of course, in its original form, very much out of place on a layout modelled on pre-war practice. I decided to look into the possibility of using the available Airfix lorry kits as a basis upon which to produce some reasonably authentic pre-war road vehicles. I purchased two AEC Matador kits and I already had an RAF refuelling set. I also used plastic card and items from the 'scraps box'.

I first tackled a fairly straightforward conversion of a Matador into a 1930s Leyland Beaver. The chassis was assembled as instructed except that the forward propshaft and axle were omitted and a new

axle of H section was fabricated from Microstrip. The rear platform and sides were next assembled. The personnel doors were filed down and were then scribed to represent planking. The upper ('canvas') sides were omitted and plastic card sides 12mm high were substituted. The 'canvas' top was then glued into place. The cab was of composite construction having a Bedford QL base and AEC sides. The AEC front was reduced in width by removing a 4mm strip from the centre and then joining the two halves together minus the windscreen glazing bars, which are a bit overscale anyway.

The rear of the cab was similarly reduced by 4mm. Seats and other details were now

added and a new cab roof was formed in plastic card. A windscreen was formed in clear plastic card, the glazing bars being applied with a ruling pen and Humbrol silver paint. The upper section of the windscreen was shown as slightly open and one of the side windows to the cab was fitted in the half dropped position. This part of detail adds a bit of life to the model. The radiator was now added and this was supplied by Ambrico. The wheels supplied with the kit are too large for this vehicle so I used one of the excellent cast whitmetal wheel sets from Eames (type W7). The rear mudguards can be slightly shrunk if held in the jet of steam from a kettle. This is a tricky operation, and needs care but does result in mudguards that, with luck, will match the wheels. If you prefer (or if your heat-shrinking operation is a disaster) you can fabricate new mudguards by laminating them from two or three layers of thin plastic card wound around a former of suitable diameter.



A united Dairies Lorry which was based upon the QL chassis and Matador cab.

The rear bodywork is now fixed to the chassis and may need lowering a little to look correct. The cab base needs some modification to enable this to be lowered so that the mudguards are at the correct height above the front wheels. The fronts of the mudguards also need re-shaping.

I painted my Leyland white with Hovis decals which are obtainable from D.G. Models who sell the transfers which they use on their Dinky replicas. There is an illustration of a Hovis Leyland in *Kaleidoscope of Lorries and Vans* by Nick Baldwin which I used as a guide.



The model of the 1930s Leyland Beaver with the Hovis decals from D.G. Models. This Leyland Beaver was converted from the Airfix AEC Matador.



Model of a 1933 Sentinel S Type steam wagon, representing a tar-spraying tanker which is what they were commonly used for, even until the 1950s.



Using the Matador chassis as a basis, Derek Church has been able to make this Sentinel DG4 which is finished in Highways Department livery, using Mabex transfers and Blich lettering.



The QL chassis and wheels plus the converted Matador cab makes this delightful model of the United Dairies lorry. The lettering is from Letraset.

A vehicle which also caught my eye in this book was the 1933 Sentinal S Type steam wagon. These vehicles were popular as tar-spraying tankers and remained in use well into the 1950s.

Taking the Matador tanker as a basis, I assembled the chassis in accordance with the instructions. The front towing hook and spring mounting as well as the petrol tank were removed. Once again I used Eames cast wheels (type W2) which are a little smaller and more appropriate than the wheels included in the kit. The rear mudguards should be lowered to allow for the smaller diameter of the wheels. The pump housing was removed from the rear of the tank before this was assembled and set aside.

The cab was built entirely from plastic card using photographs as a guide. Note the streamlined shape of the funnel and the two flaps on the roof which give access to the coal hoppers. The windscreen was formed as before from clear plastic card. The cab assembly should be fixed carefully to the chassis so that the wheel arches are central over the front axle and the mudguards sit nicely above the wheels. The tank can now be fixed to the chassis and it should be noted that this is set further back than normal to allow for the rather long cab. A platform was made from plastic card to take the pump equipment which comes with the Bedford QL kit, and this was fixed behind the tank. The housing for the tar spray nozzles was also formed with plastic



A brand new Sentinal steam wagon in 1934.



The United Dairies lorry model playing its part outside a CWS Creamery.

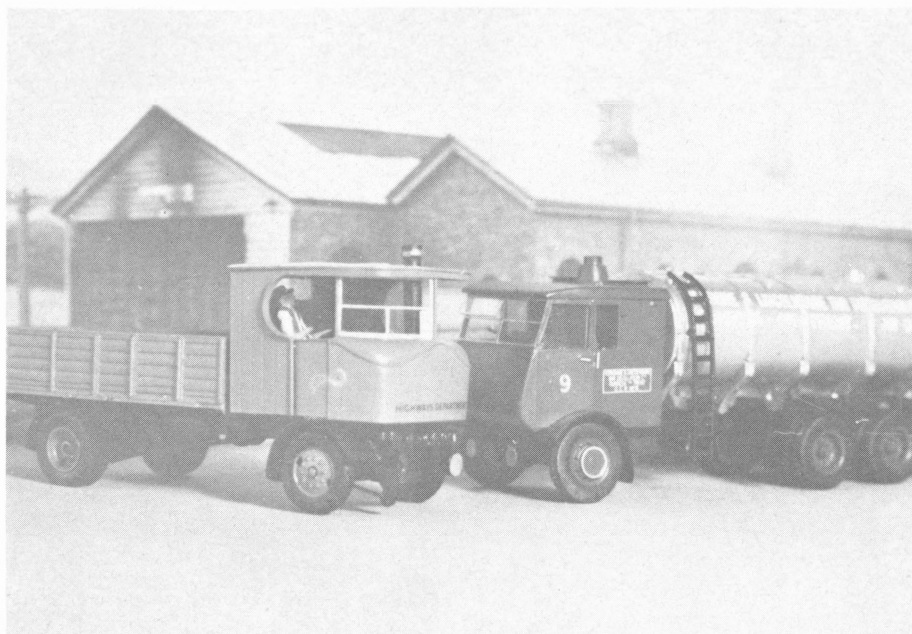


Sesntinel steam wagon starting out on the HCV London to Brighton run from Battersea Park, May 6th, 1979. (Photo: Terry A. Brown.)

card and black paper and was fixed below this platform.

Such details as headlamps, ladder, etc, were now added and the painting was finished. As usual I found it best to paint most of the main units such as the tank, chassis and cab before assembly. The transfers are of the Methfix type and were surplus to a Slater's tar tank wagon kit but can be obtained separately.

Sentinel also produced a type DG4 which was manufactured from 1929 onwards. Many saw quite long service and at least one was being used by a contractor in 1971. I used the four-wheeled Matador as a basic and assembled the chassis as normal except that I filed the road-spring mountings so that the chassis was lowered somewhat. I also omitted the propshafts, provided a new front axle and added a drive chain. The cab was formed mainly of plastic card and plastic rod. The distinctive splayed windscreen should be particularly noted. The



The fourth lorry was based upon the QL chassis which was made up as normal. The tank was assembled as per instructions but minus the delivery pipes and arms. A Matador cab with plastic card roof was added and the QL wheels were used. Upon reflection I feel that the cab is a little too wide and would have been improved by the removal of a strip, back and front, to reduce the overall width. The vehicle was painted in United Dairies colours and was lettered with Letraset.

I now have four vehicles which will fit in very well with my 1930s layout and I am at present looking into the possibility of using some of the other Airfix kits as a basis for more pre-war vehicles.

Left: The Highways Department Sentinel DG4 on the left and the 1933 Sentinel S Type tar-spraying tanker. The S Type cab was built entirely from plastic card and the windscreen from clear plastic sheet. Note the beading around the doors on the DG4 which was formed from fine plastic rod.

front were built up with a curved dash and the two rounded areas below the windscreen were formed in white Plastic Padding which I found formed the rounded shapes very naturally and needed very little sanding down. The boiler and fire-box were formed from plastic card and odd wheels from the scrape box, and the chimney was part of the gun-barrel from the kit. Beading around the doors and across the dash was formed with fine plastic rod carefully welded on with Mek-pak. The wheels, Eames type 7 cast white metal, were added to the chassis and the rear bodywork was made up as an open drop-sided version. The personnel doors were filed off before assembly. When fixing the platform it should be lowered so that the laminated plastic mudguards sit just above the rear wheels. The cab was then fixed to the chassis and the front mudguards were added. The wagon was finished as a Highways Department vehicle using Mabex transfers and Blick lettering.

Right: For comparison the Hovis Leyland Beaver is parked on the left to a 'de-militarised' Matador. Note the lowered cab which makes the mudguards the correct height above the front wheels which are Eames (type W7) cast white metal.



Useful books

Kaleidoscope of Lorries and Vans, by Nick Baldwin. **Steam Traction Engines, Wagons and Rollers in Colour**, Brian Johnson. **British Lorries 1900-1945**, by C.F. Klapper.

Useful Addresses

D.G. Models, 2 Linden Ave, Halesowen, Worcs. (transfers).
Mabex Products, 31 Pevensey Road, Eastbourne (transfers).
Anbrico Scale Models, Pudsey, West Yorkshire (cast radiators, etc).
Eames, 24 Tudor Road, Reading, Berks. (cast wheel sets and raditors, etc).

Left: All four subjects of conversion are here viewed from the front. Without too much trouble, railway modellers can have four neat little vehicles appropriate to a 1930s layout.

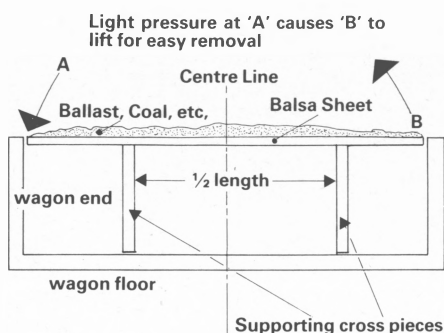
will be appreciated and returned.

**David M. Noble, 24 Belle Vue Terrace,
Skipton, North Yorks.**

Please contact Mr Noble direct if this subject interests you — but we'd be pleased to hear of any models (or kits available) relevant to this subject. **Editor.**

Wagon loads

I wonder if I might make a small suggestion with reference to your article concerning wagon loads (September 1980, page 519). If the supporting cross pieces of the top load sheet are confined to half the length of the load, spread equally about the centre line, the load can be removed by pressing lightly on one end (A). This does away with the need for the screwdriver with its attendant risk of damage to the wagon body.



Ian Paterson, Haxey, Doncaster.

Park Royal Railbus

Like Richard Gardner (December issue) I have been able to obtain an Airfix Railbus kit in recent times. I also found an Eames motorising kit which, compared with the Piko chassis, has the advantage that very little of the mechanism protrudes into the body. Both axles run in brass bearings with an element of compensation to cater for uneven track. The outsides of the bright pole pieces of the motor and other non-conducting parts were painted with Floquil weathered black paint and when this was dry some Humbrol glossy black paint was added in faint traces to give an impression of oil accumulations.

Whether or not the Piko or Eames chassis are used, added details help to improve the model. Windscreen wipers were added to the driver's window — right hand side window when looking at each end. The wipers were made of fuse wire secured by faint traces of impact adhesive and positioned with tweezers. The axlebox covers were painted yellow to indicate they were of the roller bearing type and destination blinds made. The blinds were made by first coating a piece of good quality paper with black indian ink. When dry this was then lettered with white indian ink using a mapping pen. The best of several efforts were then cut out and fixed to the roof boxes.

The Railway Magazine for October 1958 reviewed the prototype railbus and described the interior: tubular steel seat

frames with blue patterned cushions, floor covering blue linoleum, blue body panels from floor to waist level, grey above to roof cove, centre of roof eggshell grey.

**A.M. Lawrence, East Grinstead, West
Sussex.**

Help wanted

The Hillingdon Association of Voluntary Services, which is a co-ordinating body for voluntary organisations in the London Borough of Hillingdon with some 200 member societies, operates a 48 seater motor coach to give outings for the physically and mentally handicapped and the elderly. To help meet the running expenses we are converting the old coach into a mobile 4mm scale exhibition model railway. We would appreciate help in two ways.

Firstly, we would greatly appreciate the gift of any unwanted model railway equipment, of any gauge, which your readers may have spare. The equipment which we cannot use on our model can be offered in part exchange through our local model shops for items which we can use. We would be especially grateful for used or new Peco Streamline track and points and any made or unmade buildings.

Secondly we need about four extra experienced modellers to join the team building the layout and who will also operate it when it is complete. We are looking in particular for a scenic expert and someone with some electrical expertise. If these modellers also have experience in maintaining motor coaches or large commercial vehicles so much the better.

We can arrange to collect equipment within a reasonable radius of Uxbridge and I can be contacted by telephone in the evenings or at weekends on 01 561 7798. A stamped addressed envelope would be appreciated from anyone offering to help build and operate the layout. All gifts will be gratefully acknowledged and the names of the donors displayed in the vehicle when the layout is completed.

**Richard Hampson, HAVS,
Communicare, Christ Church, Redford
Way, Uxbridge, Middx UB8 1SZ**

Any reader wishing to help this worthy cause please contact Mr Hampson direct.

Editor

Chipboard

Having read the November edition of your excellent magazine I noticed in the article 'Western Mining Co' you once again strongly advise against the use of chipboard for baseboards. I have always used chipboard for my numerous layouts. Always 3/4 inch thick, both 2 inch x 1 inch braced and unbraced.

I have never used track pins for the reasons you state. Seventeen years ago I obtained free a large tin of household pins. It is these I use. My method may be of interest to your readers.

The household pins are cut with pliers to about two thirds of their original length. The track sleepers are drilled with a fine hole by holding a drill in a pin check. The

distance the holes are apart varying according to whether straight or curved track is being laid. The shortened pins are inserted through the pre-drilled hole, which is a close-fit, and knocked home with a light weight hammer. I have always used foam ballast underlay.

I have found that the pins are easily withdrawn with long nose pliers and some pins have been re-used time and time again.

C. Washbourne, Thornbury, Bristol.

1981 from page 61

loads for the existing wagons.

The really vast programme comes from Hornby, with no less than 14 new locomotives, some new and others updates of older models. Look for a reworked *Flying Scotsman* in 1928 A1 form, a GNR 0-6-0ST (later LNER J52) in GNR finish, the LNER version of the A4 in blue and with side valances, this time as *Seagull*, a BR Class 86/2 electric, a blue 'Western' (*Western Harrier*), and the 08 in BR blue, but not, alas, reworked with outside frames. The 'Britannia' re-appears with extra detail as a Western Region loco *Morning Star*, but with optional names and numbers (*Royal Star*, *Thomas Hardy*, *Robin Hood*) for those favouring other locos. The Bulleid BB 4-6-2 is another reworked release, named *Spitfire* and in SR finish, again with optional names and numbers (*Hurricane*, *Manston*, *Fighter Command*). An improved Stanier Black 5 is coming, and a bright red industrial version of the Caley 0-4-0ST named *Desmond* and intended for youngsters (it will also feature in a 'Junior' train set). Of historical interest, however, is the fact that Hornby are repeating the famous marketing ploy of the 1930s by having a 4-4-0 for each major railway of those days. What's more they are repeating the same locos, but this time in OO instead of tinplate 0. Thus we will see a Midland Compound, GWR *Country of Bedford* (looks good), a 'Shire'/'Hunt' 4-4-0 (LNER), and a 'Schools' (SR). Smoke units are planned for at least two of these 4-4-0s. There will be a new APT set reproducing the latest colour scheme change and with the power car geared to give a scale speed range. SR Maunsell coaches (compo and brake/3rd) will please Southern fans, new contemporary models and Speedlink versions of existing standard types. A GWR footbridge is new, actually the first 1981 release (see next issue), while Zero-1 will offer its Phase 3 stage with Micomimic Display System on which your track plan can be marked (rather as in modern full-size computer operated signal boxes) and the whole lot linked to the Phase 2 equipment. Among the possibilities of this will be remote control of up to 99 turn-outs.

Lastly there is a Hornby re-run of *Lord of the Isle* in a limited edition (5,000) as a set with the clerestory coaches. About £75 (UK) but with a promise of no further production for at least five years.

Ratio have quite a programme promised, including GWR bracket and junction signals, Highley signals box (GWR Severn Valley) as a kit, a GWR loading gauge in plastic and brass (UK 97p) and the two Midland loco kits (Johnson 4-4-0 and 2-4-0) will be available again with superior motors, chassis, and wheels. Later will come a rake of GWR clerestory roof coaches in kit form. Some of the old 2-4-0 kits are still available, with a new West German motor.



The Way of the 'Warships'

It seems only yesterday that the exciting new green diesel-hydraulics of the Western Region were arousing lots of interest at stations along the road to the west. Today they are but a memory, for although a handful have survived the cutter's torch, their clean simple forms no longer grace the seawall at Dawlish or stand throbbing at Paddington. But the memory lives on amongst railway modellers for the 'Warships' are one of the most popular subjects in 00 and N gauge. This is understandable. The class was one of the earliest in the BR Modernization Plan to enter service and as such it operated alongside the classic GW steam locos right through the transitional period, ending its days in blue and yellow livery on the former London and South Western main line to Exeter out of Waterloo.

The 'Warships' wandered far and wide during their lives. Starting with top link named WR express duties, such as the *Torbay Express* and *Mayflower*, *The Bristolian* and *Cornish Riviera*, they also handled cross-country trains and could be seen from Salisbury to Crewe on anything from an express to a fitted freight or stone train.

Because they were introduced in 1958 and served until 1972 the 'Warships' carried three basic livery variations, with quite a few detail differences, between the individual members of the class. At first they were overall green with mid-grey roof and light grey or off-white side stripes. Later yellow nose visual warning panels were added. From the mid-1960s about half the class were repainted in coaching-stock maroon with either small yellow panels, or a little later, full end treatment in yellow. This was a good idea to bring them into line with the 'Western' class and to integrate the engine visually with the train — but more often or not this resulted in a very odd-looking sight with maroon engine hauling mixed

Green machine D868, Zephyr, arrives at Reading with an express in 1962. Most coaches are maroon but the corridor first is in chocolate and cream. Patchy finish on the locomotive shows evidence of much cleaning. If you prefer this early 1960s period, paint out the yellow panels on your model.

Richard E. Gardner remembers a pioneer diesel class and takes a closer look at the Mainline and Lima models... with a long term report on performance

trains of maroon, chocolate and cream and even blue and grey coaches. On the SR the previously integrated green 'Warships' pulling green coaches were replaced by the out-of-place red locos. The change to maroon came too late before the change to blue to ever achieve the desired effect... but it was interesting to the lineside observer as one never quite knew what to expect!

When the WR brought back the chocolate and cream livery for named trains around 1958 it undoubtedly gave added dignity to the formation. Most of the important trains consisted of BR Mk 1 coaches but ex-GWR catering and older first class vehicles were included, as were many full brakes. The shiny green 'Warships' with their white discs and GW indicator boards could almost have been from the GWR era. Kept clean, the combination of green 'Warship' and chocolate and cream coaches with crests and destination/-name boards on the coaches was an imposing sight. Later Mk 1 coaches were nearly all finished in maroon with natural metal ventilator edges and Commonwealth bogies. To many the maroon never looked quite right on the WR, whether as loco or coach livery.

Maroon somehow seemed more natural at Euston or 'up north' on the LMR lines. The chocolate and cream with green engines blended with the countryside on the Western.

After the mid-1960s the major 'Warship' tramping ground was the Western Division of the Southern Region. The WR had taken over the SR routes west of Salisbury and this included the London-Devon express traffic. In the final years of SR steam the 'Warships' ran in good external condition with maroon and blue alongside each other for a while. Red engines had 'Western' style crests at the centre of the body in place of the standard loco crest. At least one had a crest beneath the cab windows instead. By this time there were few green 'Warships' left. One or two maroon locos had white BR 'Zigzag' logos beneath the cabs just

All photos by author

The definitive 'Warship' Class was preceded by a batch of five A1A-A1A 'Warships' from the North British Locomotive Company. Here D601, Ark Royal, climbs along the cliffs above Goodrington, with the down Torbay Express in 1959. Note the old 'steam age' express headcode — two discs.



prior to receiving rail blue paint. The final blue paint scheme looked smart with the entire end painted yellow, but hardly any two 'Warships' carried identical livery details. Some had end logo with loco numbers under the cabs. Others had end logos with numbers moved inboard of the cab doors... and others had central logos. The yellow end demarcation also tended to vary a little. The 'D' was deleted from the numbers during 1968 — the year of the first withdrawals of the class.

The 'Warships' had been in the front line of WR motive power for just a decade. They had served only a quarter of the time span of the 'Castles' which they had displaced on so many routes, but they had served well. The wisdom of the Western's go-it-alone policy on diesel-hydraulic power will remain a subject of heated controversy — was the policy one of defiance and faith in the face of standardization, or was it an ill-judged experiment? Towards the end of the era the 'Warships' took on a particularly miserable appearance with faded and battered bodies covered in grime — rather like many of today's Class 50s on the Exeter run! In terms of age the 'Warships' were withdrawn prematurely, even by diesel locomotive standards, but they were victims of the decision to concentrate on diesel-electric drive throughout BR.

Models

The 'Warship' is one of the most widely reproduced in model form, reflecting the style and character of the real thing which captured the imagination even of steam enthusiasts! The first model appeared in the old Trix range some 20 years ago. At the time it seemed the ultimate and the model press were highly enthusiastic due largely to the

V220 diesel hydraulics of the DB at Reine, West Germany. The close family resemblance of the 'Warship' Class is obvious in this view. The locomotive on the left, 221 142-3 is in the new beige and blue colour scheme whereas Nos 220 037-6 and 058-2 are in the older red and grey. The generous continental loading gauge enabled the cab to be placed high up on the body, but apart from the enlarged end windows and a general scaling down the British 'Warships' were remarkably similar.



The Mayflower arrives at Reading General in 1962. Loco is D857, Undaunted. This loco is in green livery before the yellow panels were added a year or two later. Note the shed plate on the front buffer beam. With the coming of the four-digit headcode panel, the old discs have been removed.

smooth performance, great power and body detailing. By today's standards, however, it seems very crude. It had details which never existed and skirts which moved with the bogies! Over-scale lights were fitted though the end design was not too far from the original batch of 'Warships' with solid nose panels. The windows didn't look right and the ventilators were run together from the roof down the sides. But at a distance of three feet or more it didn't look too bad and it did work well.

The next 'Warship' to appear was from the German firm of Märklin. This model was based on the same firm's V200 diesel-hydraulic of the DB, just as was the original BR 'Warship'. The body was new but the sides were too high in relation to the roof and the ends

were decidedly Germanic in character. Performance was up to the best Märklin standards but the model never caught on. Like the Trix model it was to neither OO (4mm) or H0 (3.5mm) scale, but somewhere in between at about 3.8mm to the foot. Had it been to true 4mm scale then perhaps the high price barrier would have been overcome. Both the Märklin and Trix models are now collectors' pieces.

Although the Märklin 'Warship' was also available in the same firm's Hamo range in 12 Volt 2-rail, a true HO (3.5mm) scale model followed more recently from Fleischmann. This latter model is in a different class altogether with perfectly reproduced details including chromed window frames and a performance to match its looks. The cheeky Germans even included a second-man in the driving cab reading a newspaper! Despite the release of a trio of Bulleid coaches the Fleischmann range of BR models has not had the big impact on the British market it



deserves. This is a great shame for the models are of a very high quality. The problem is the age old one of disparity between 00 and HO, and never the twain shall meet in visual terms. However, if you want to work in HO British terms, then these models can hardly be surpassed. The Fleischmann 'Warship' comes in green or blue and is the only model with full skirts below the buffer beams and brake pipe detail.

Those 00 modellers who may have been disappointed to find the Fleischmann model only available in HO scale have now been rewarded by the recent release of no less than six new 00 'Warships' from Lima and Mainline. They appeared in the Spring of 1980. Lima from Italy and Mainline from Hong Kong! It seems everyone is producing 'Warships' except the British!

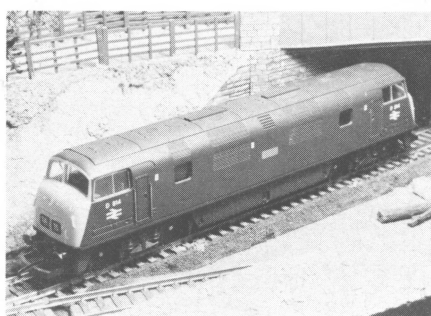
Initial reviews appeared in *Model Trains* No. 6, June issue, but the test samples have now been in regular use on my Linfield Junction layout for the last six months and so it is possible to give an indication of how they have behaved in service under average conditions.

The Lima model, which originally ran smoother than its Mainline brother, has developed a tendency to stick in motion. Slow running has actually deteriorated instead of improving with use. With modern sealed motors it is more difficult to check to see what is causing trouble. The Lima bogies are well protected from dust, and pick-up has never given cause for concern so the trouble is in the motor itself. A general clean-up made little difference to running and it is suspected that the gearing has worked itself slightly out of true. The old saying 'you gets what you pays for' does have a bearing on the hobby. The Lima models are amazing value and on the whole run very well, but quality seems to vary much between individual examples. Both the 'Warship' and the earlier 'Western' have developed sticking habits after running in, even though both were perfectly smooth when new and my tracks are not covered in dust as the

Lima 'Warship' photographed shortly before the Linfield MPD was demolished. The lighting shows the well-moulded ventilators to advantage.



The first batch of Swindon-built 'Warships' had an end design almost identical to their German cousins. This view of D808, Centaur, shows the plain front with a light frame to hold the WR train reporting codes. The front discs indicate an express, in this case the up Cornish Riviera. Photo was taken in 1963. Coaches are in the special 'named train' livery of chocolate and cream.



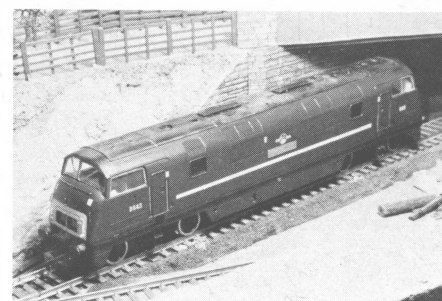
Lima model emerges into the sunlight running light towards Mountwarlock.

layout is in regular use with trains running almost every day.

The Mainline model on the other hand has improved with use. The weight of this version is considerably less than the Lima model but even without extra ballast it can manage a seven coach train at a scale 80mph. The gears have meshed in well and running is excellent. Pick-up is adequate to allow slow threading of turn-outs without any trace of stalling. So since the June 1980 reviews appeared the performance 'score' has reversed itself. The Mainline loco now scores on both appearance and performance.

By shopping around a Lima 'Warship' can be obtained for as little as £7.50, though it could cost as much as £12.50 in some shops. The Mainline 'Warship' will usually be priced at around £15 but some mail-order firms and special offers reduce the price to £11. It would seem that the lower price the Lima 'Warship' is still good value and worth adding to a collection, but where the price is above £10 it would be better to invest in the Mainline version, even if paying the full RRP for the latter.

Both models are offered in three colours with a total of six names. The Lima green machine has no yellow panel, both maroon models have small



Mainline 'Warship' in ex-works condition after repainting with dirtied roof. Note that the handrails on the ends should be left polished for a green or maroon loco. Light grey stripe is added from a Kemco transfer sheet.

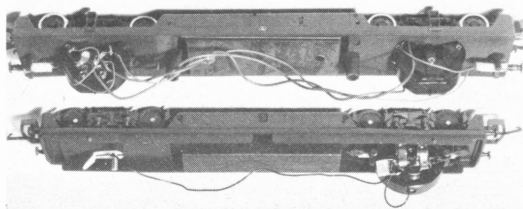
yellow panels, and both blue ones have complete yellow ends. The Lima blue depicts a slightly earlier scheme than the Mainline blue.

Bringing the Lima model up to Mainline standards of detailing should not be too difficult and offers scope to those who cannot resist adding wire handrails, lamp irons and similar items. One of the centre roof grills should be filled in as it only appeared on one side of later 'Warships'.

If you wished to alter the ends to the earliest style, with no headcode panel, a frame for the reporting number, and white discs, then the Lima model will

be much the easiest to convert as it does not have an illuminated panel. Rub down the panel detail, fill with plastic putty, use Microstrip for the frame, and card punchings for the discs. The picture given here shows all this detail.

As bought the Mainline Warship is so beautifully finished there is little to add except for a spot of weathering of the roof and lower body panels. Engraved



A comparison of the Lima (top) and the Mainline 'Warships' minus body mouldings. The Mainline motor is on the right hand bogie. Wires lead to diode-controlled lights. The Lima model features a much heavier weight but there is plenty of room for adding extra ballast to the Mainline version. The two body mouldings with Lima to the top.

nameplates from Kings Cross Models add the finishing touch. If desired the small steps fitted to the front of the engine on the outside of the buffers can be added from plastic sprue, or wire if the model is to receive a fair bit of handling.

As my own layout is based on the transitional steam/diesel period I decided to repaint the blue review sample in the earlier green with yellow



'Warship' Sharpshooter after light weathering on the lower body panels, as well as roof. Kings Cross nameplates give a most realistic glint as only polished metal can.

panel. Using Humbrol standard BR loco green hand brushed with downward strokes, the task was accomplished in an evening. The roof was dry-brushed with a mix of matt black and track-colour. As only one side of the engine is visible at once I decided to leave one side reasonably clean while the other side was given a thin layer of 'road dust' from half way down the side. The concoction this time was built up from a mix of khaki and track colour carefully dry brushed to almost 'dust' on the colour. The finish of the Mainline 'Warships' straight from the box is absolutely superb and cannot be matched for ex-works machines. I would hesitate before applying too much weathering to the model in case one overdoes it! In my case I was hand painting merely to change the identity but with all the colour variants now available there is no need for anyone else to follow my example! A subtle touch of weathering is all that is

needed. After all it is far easier to add more grime but a heck of a job to remove it later if you get carried away! If desired you can add brake and heat pipes to the buffer beam as described in recent articles on diesels in this magazine.

No layout based on BR Western Region practice (or SR, Western) can be without at least one or two 'Warships' and we are lucky we are to have such realistic models available. Even if you are not normally a diesel enthusiast you'll find these models worthy of consideration, for they are diesels of great character.

As a footnote, N gauge fans have an excellent 'Warship' available in the Minitrix range, again based on the Minitrix V200 chassis. Within the usual limitations this is one of the best of British outline locomotives available in this scale, both in looks and performance. It comes in green or blue finish and is worth a good look.

Bookshelf

from page 79

commercial truck. He covers all popular scales, including the model railway sizes, and packs in loads of pictures, diagrams, and scale drawings to back up his informative text. The book fills a gap in available guides to the subject, and if your layouts need road-vehicles this should tell you all you need to know. You'll be familiar with the author's knowledge of the subject from his writings in this magazine.

Colorado Rail Annual No 14, edited by Gordon S. Chappell. Colorado Railroad Museum, Box 10, Golden, Colo 80401, USA. In UK from Victors, 166 Pentonville Road, London N1. £8.75.

Old time American 4-4-0 locomotives and rolling stock, the sort of thing available as models from Bachmann (also Airfix for a time) and Rivarossi, attract a lot of attention. Finding out how they operated and the appropriate settings for such models is more difficult research task if

you live on the 'eastern side of the Atlantic. Well, this marvellous book could be your starting point. It is packed from cover to cover (232 large pages) with three major sections of text, maps, drawings, track plans, and wonderful archive pictures which will really open your eyes to the possibilities. It covers both standard gauge and 3ft narrow gauge (common in the west). The section on Creede is remarkable in its depth of coverage, and is a most valuable and complete as a work of reference. It takes a townships caught up in the mining boom of the 1880s and shows its development (in railway terms) from 1876-1877. With maps, pictures, and timetables thrown in it gives all you would ever want to know to make a layout based on the Creede branch. Situated in a narrow canyon, Creede itself is a gift for modellers. Other subjects in the book are covered in comparable depth. If the subject interests you, don't miss this

book. We're sorry we missed the previous 13 volumes.

N & W: Giant of Steam, by Major Lewis I. Jeffries. Pruett Publishing Co, Boulder, Colo, USA. \$35. In UK from Victors, 166 Pentonville Road, London N1. £17.50.

Norfolk and Western Railway Co made most of its living hauling coal in Ohio, Virginia, and the fringes of North Carolina. Because it was in the middle of the most prolific US coal fields, it retained steam power longer than any other major US railroad, right up to 1960 in fact. For heavy coal haulage, it designed some spectacular locomotives including the 2-8-8-2 Mallet type, well-known as a model. This book is specifically a detailed survey of the development of N & W steam locomotives up to 1960, though the first part gives a company history and a lot of route and facility information. The final

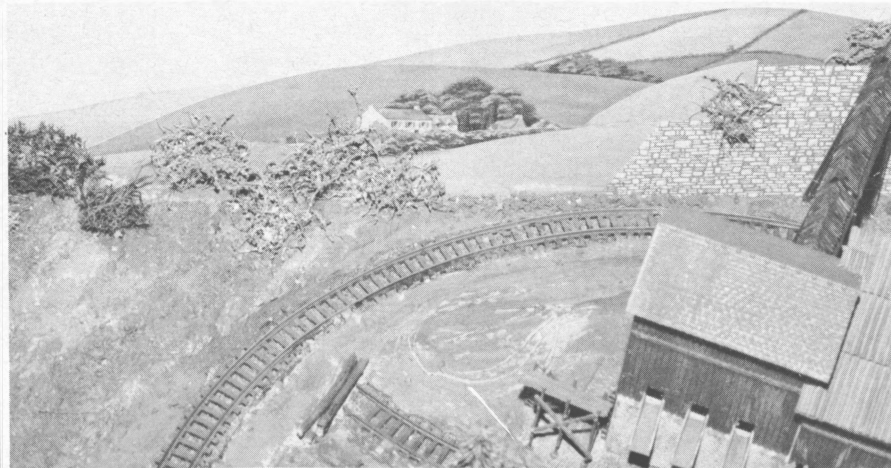
Continued on page 104

Western Mining Co.

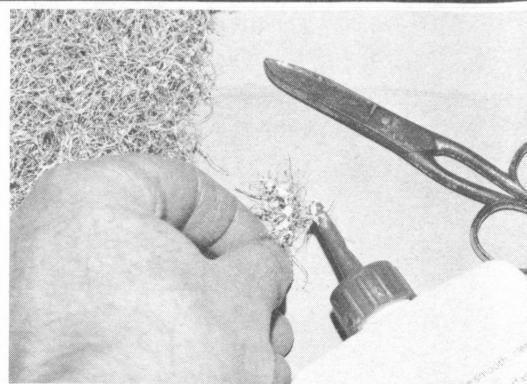
First steps in narrow gauge with a very small but very adaptable layout you can build

A small area like this has the great advantage of being quite quickly finished off, which is why this layout is a pleasing diversion from other model railway activities — it won't bog you down for months like a layout covering a huge area. Already the end of the work is in sight and the various additions shown here finish off the layout in structural and scenic terms. Like all layouts, however, it is never really finished as there is much more which can be done with it. You can operate this layout quite happily as it now stands, but a list of further possible improvements gets surprisingly long. For example our future shopping list for the line includes a Preiser horse-drawn log cart to bring in felled timber to the timber loading spur; we also need more figures (though not too many here in the backwoods), including the gang of Preiser wood-cutters who can set to work in the same area. A few workmen will be needed for the ore tipplers, too, plus another elderly vehicle to supplement the old Ford truck. Future structures will include a small power house near the big tippler — wood fired — to provide some domestic services and also to drive the covered conveyor leading into the tippler. Some sort of small bunk-house is also needed as a mess hall for the workers, and possibly an office. Then we could run a telegraph line up the valley to the office, just single poles with a single line. In other words future development could follow

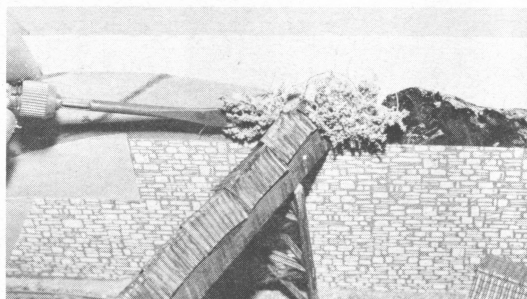
Bushes and trees can be used to disguise the joins between the actual scenery on the board and the flat backscene. Here we have added bushes above the retaining wall and all along the surface join. These bushes also hide an abrupt division line between the overlays we pasted on to the backscene. That house belongs to the mining engineer! Along the track bed we've added some ground foam to suggest weeds and low growth.



Picture sequence starts here.



Above and Below: *Bushes and general undergrowth are made mainly from rubberised horse hair, as sold in the Jack Kine Hedging Kit (though there are other sources). This gives a realistic effect of thin branches and leaves.*



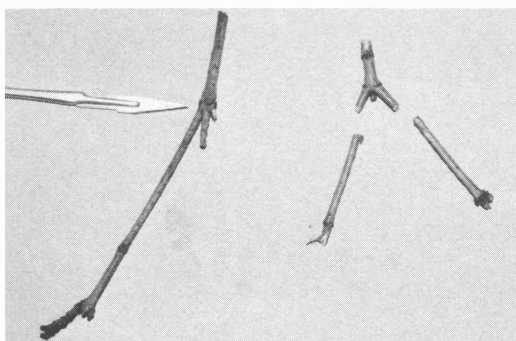
Above: *We use bushes to disguise the join between the overhead ore conveyor and the backscene, simply by cementing bushes to the area of the join.*

coming up from ground level and obscured by bushes to give the suggestion that the ore is conveyed in from somewhere. The conveyor is taken in through the side window aperture. The other half of this garage can be used later, to make a bunk-house over at the other tippler, as suggested above.

The new tippler is lightly glued in place over the end of the siding and it can be lifted away easily if we later extend this siding on to another baseboard as suggested last time. It has to be admitted that operations on this small sort of layout are quite limited compared with a big standard gauge layout. Essentially your locomotives are simply shuffling ore and timber from the loaders on the board to your fiddle yard or interchange of the type previously discussed. However, this is not necessarily boring because the lack of run-around loops and the potential congestion in the sidings can keep you on your toes. Take the two tipplers. The big one holds at least four

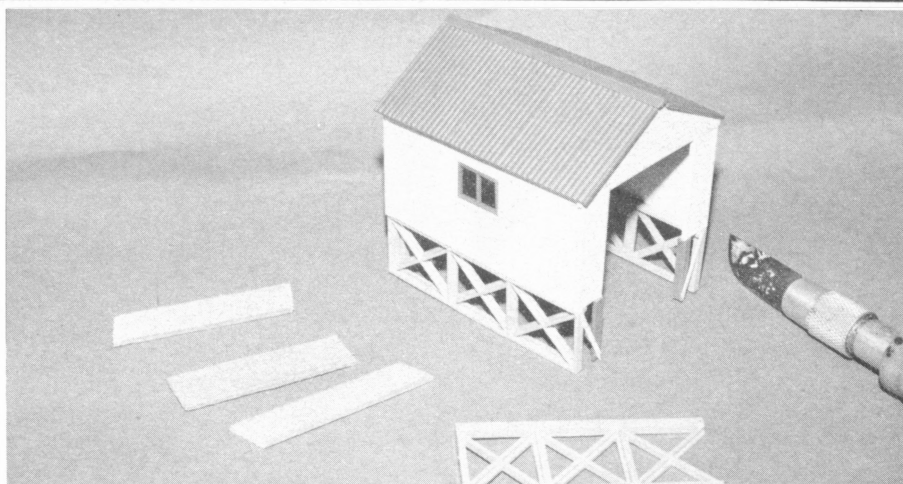
hoppers in its siding, and the small one holds two. If your loco brings up six empty hoppers to change for loaded hoppers at these two sidings you'll have to do much moving back and forth to get the loaded hoppers out and the empty hoppers in. Try it for yourself and you'll see that it has quite a lot to offer in the way of train movements. Now if the layout is used as a 'plug on' addition to a standard gauge layout in the manner previously suggested you'll have a nice little mining branch which can be operated independently but which will interchange with standard gauge trains. One operator will be kept busy running this mining branch, and if you are short of space then it gives you a perfect little project which will not get in the way. We operate the layout on the table, just plugging in the controller and keeping it on the table alongside the board. When not in use we slide the entire layout out of sight under a settee.

Follow the pictures for a detailed look at the final work needed to get the layout visually complete — but bear in mind that there is always plenty more to do. Also bear in mind that you could give the layout a completely different scenic treatment and end up with something looking quite unlike our efforts.

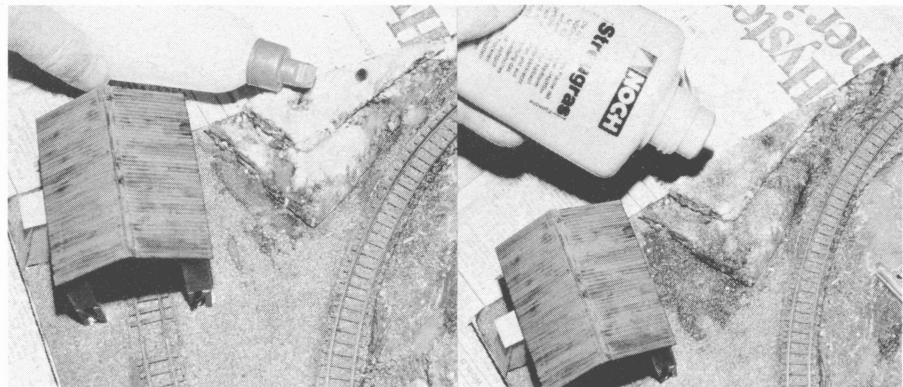
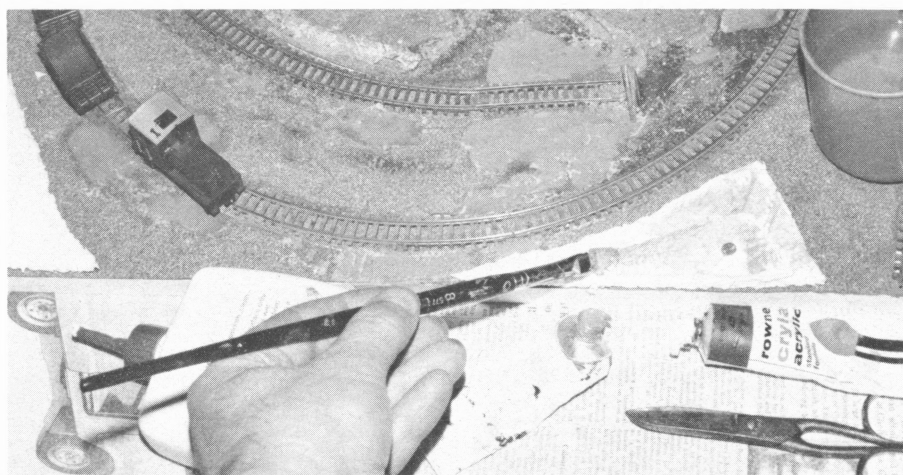


Above: We wanted some tree stumps around the tippler area, supposing that trees would have been cleared when the site was prepared. Here's an easy way to make them. Find clean dry Y-shaped twigs and cut off the branches just clear of the 'Y'. The twig is used upside down you'll note. Then just pierce suitable holes in the ground and glue the stumps in place, the knuckle of the 'Y' giving the correct effect where the trunk widens into roots. You can do this for any scale, choosing twigs of the appropriate size.

Continued from the November, and December 1980 and January 1981 issues.

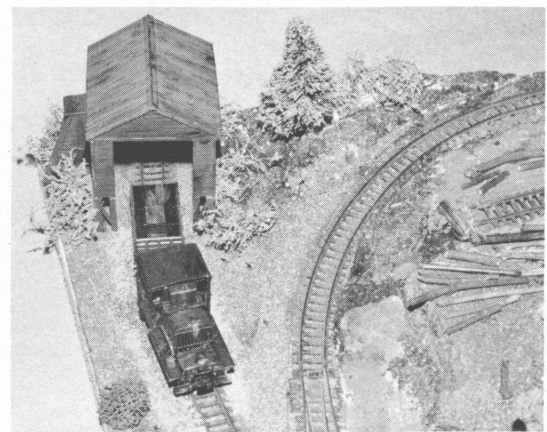


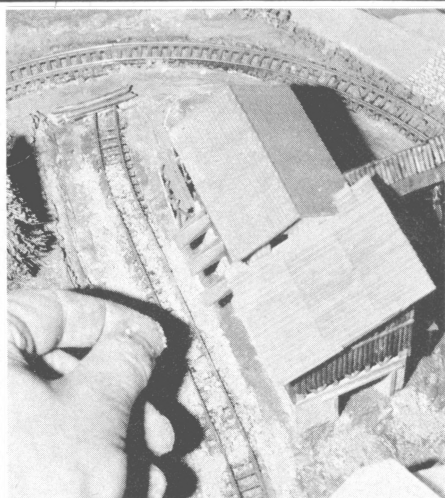
Above: the No 2 Tippler structure is a simple conversion of the Wills 'station garage' raised up on girders from the Airfix foot bridge, and depicting a covered loading area. At left is the conveyor for this, balsa scribed to depict planking which will be assembled to cover the side window. Paint the complete model in browns or greys, with weathering, before cementing it in place. With the door cut-out heightened, this garage unit would make an engine shed for a small NG diesel if required.



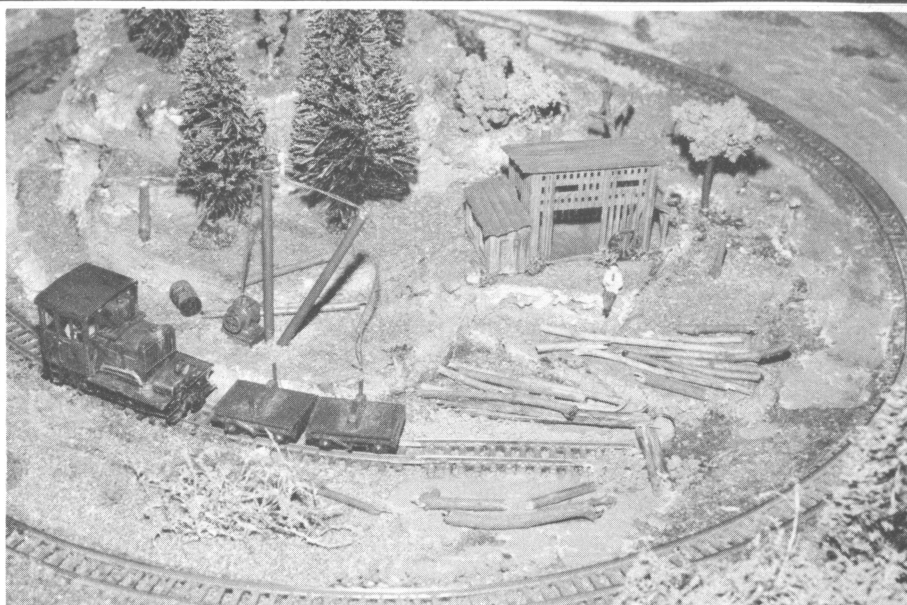
Above: The near end of the layout now receives attention. More ceiling tile is broken and glued in place as desired to depict banks or hills, and is painted grass colour or earth colour to suit. We then ran office glue over the painted areas, and adjacent parts, and sprayed it with the new Noch Streugas.

Right: This is the same corner after Streugas treatment, with tippler in place and bushes added.

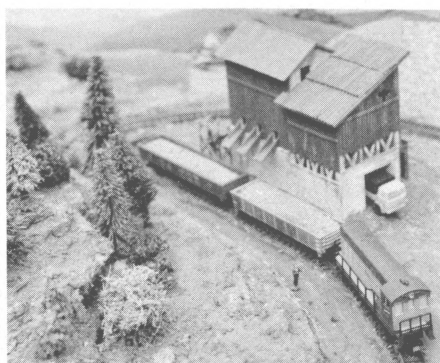




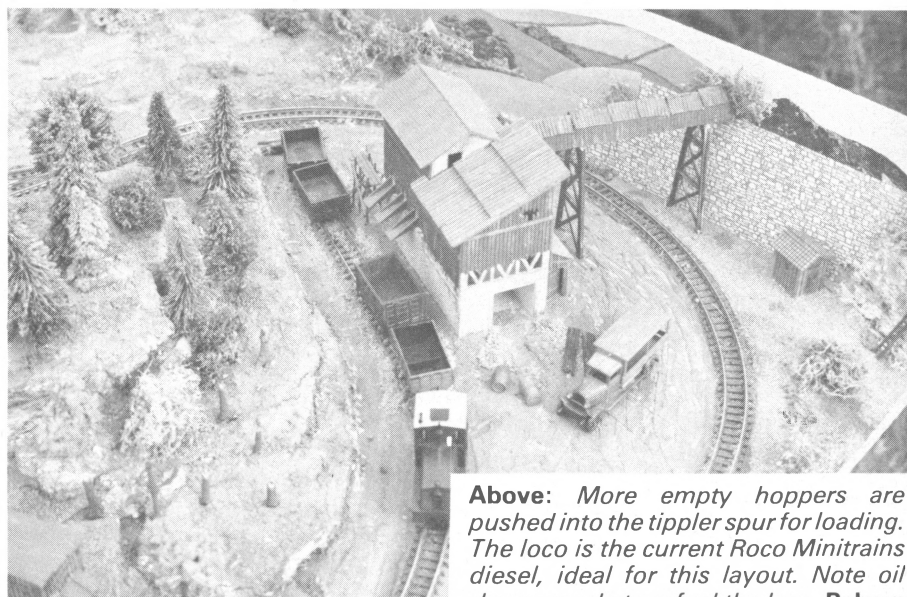
Above: Around the tipplers we would expect much spillage from the ore (or whatever) that the mine produces. We smeared the area under the hopper loading chutes and round all entrances with glue, then sprinkled fine grey ballast around. This gives a contrast colour to the ground and looks very effective. If your mine was producing lime or coal you would obviously need material of the appropriate colour. The hoppers themselves may also need weathering to suit.



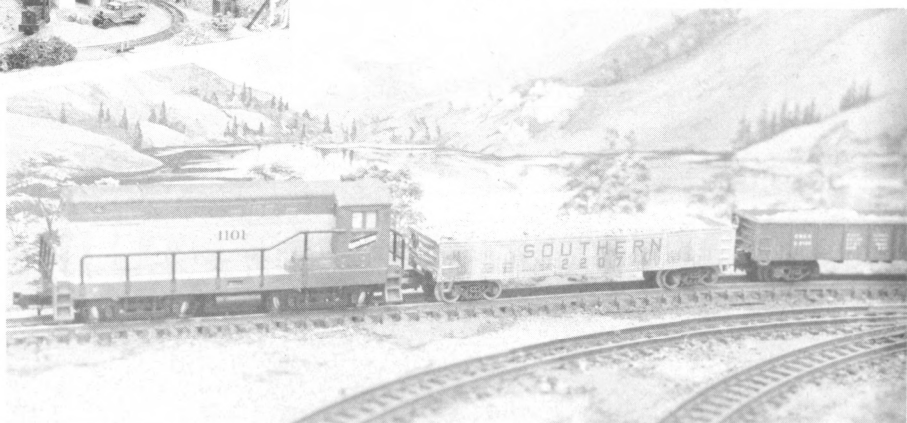
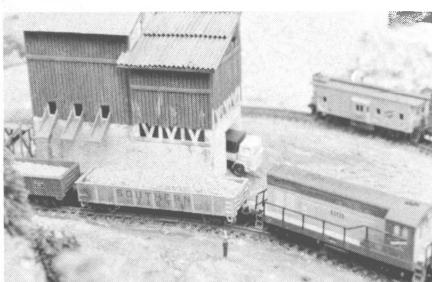
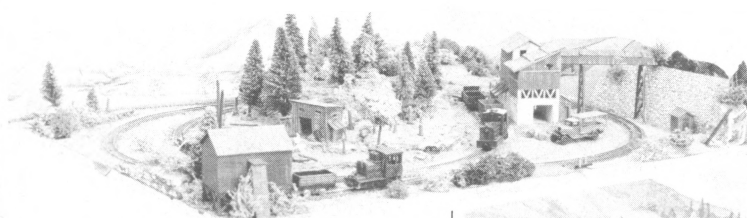
Above: You can have a lot of fun around the timber spur. We used two nails with the heads removed to make a tubular steel derrick, with an old motor casting from the scrap box to depict a petrol driven winch. Cotton was used for the purchase. This derrick is used to load the wagons. Tree stumps were added, then a selection of twigs of suitable size to depict logs awaiting despatch. At present the only workman in sight is sitting down outside the hut eating his lunch, but some Preiser wood cutter or similar active figures are needed to complete the scene. Horses or horse carts can drag in the felled trunks from the nearby hillside.



Above: By contrast to the view on the right, here is the tippler when the layout is used as a standard N gauge mining branch. It is necessary to change the figures, vehicles, and loose accessories but that is all. **Below:** This is the entire layout, all 4 square feet of it, on completion.

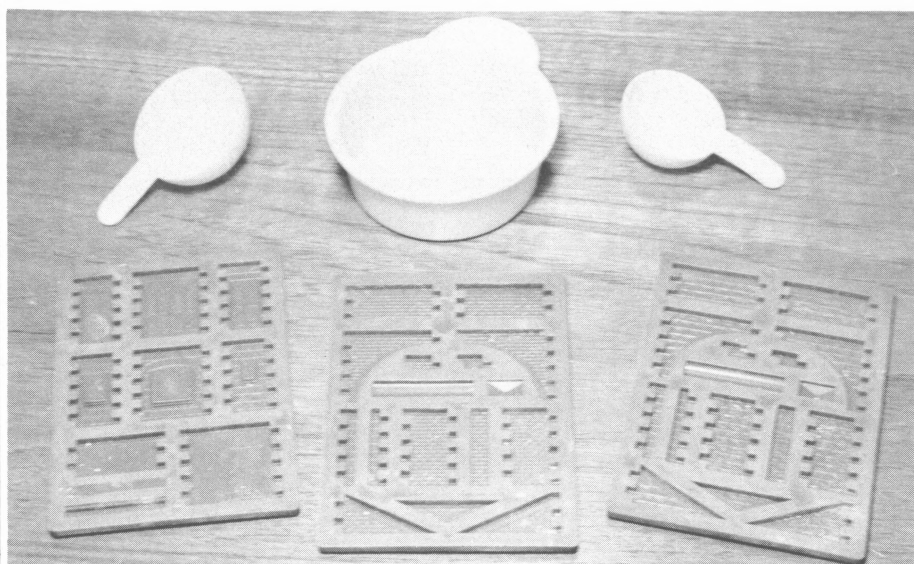


Above: More empty hoppers are pushed into the tippler spur for loading. The loco is the current Roco Minitrains diesel, ideal for this layout. Note oil drums ready to refuel the loco. **Below:** The Fairbanks — Morse diesel and stock from the Warren branch running on the layout to demonstrate its standard N gauge use.



How we made the Westport Branch

Build this 00 gauge layout with Michael Andress. Part 5: Working With Linka for the structures



Three typical Linka moulds. Behind are the measures (on the left 25ml for the Linkalite Moulding Compound, on the right 15ml for water) and (centre) the mixing cup.

One of the advantages of a small layout, as I have already suggested, is that we can enjoy a variety of construction work without an excess of any one type which could become tedious. A further benefit is that we can get something running without undue delay on a small and relatively simple model railway and so can alternate building and operating, gaining maximum enjoyment from both, as the mood takes us. Practising what I preach we already had the Westport branch operational, with a few structures built previously and some imagination making up for the incompleteness of the setting. Though much of the basic scenic work had been carried out there were still the hill and tunnel to be constructed and then as much or as little detailing as is desired to complete the picture.

Enjoyable though the scenic work is I decided that it was time for a change and that we should start on some structure modelling. For this project I choose the ruined fortified watch tower to be situated on top of the hill. My historical knowledge is limited, to say the least, but it seemed a logical place for some form of look-out post, even if the exact period of the building was to be kept rather vague! Apart from my wish for some variety in construction work I also felt it would be easier to build this model on a small base which could then be incorporated into the top of the hill as the latter was constructed, rather than to model

the hill first and then add the tower to it.

There are a number of HO scale plastic kits from European manufacturers which could be employed, in some cases with modifications to make the architecture more British in appearance, but I decided on a different method of construction. This model seemed an ideal introduction to the use of the Linka system of structure modelling, a system which though becoming popular is still relatively new and may not be familiar to everyone.

The idea of employing plaster castings in structure modelling for railway layouts is not entirely new. A number of scratch-

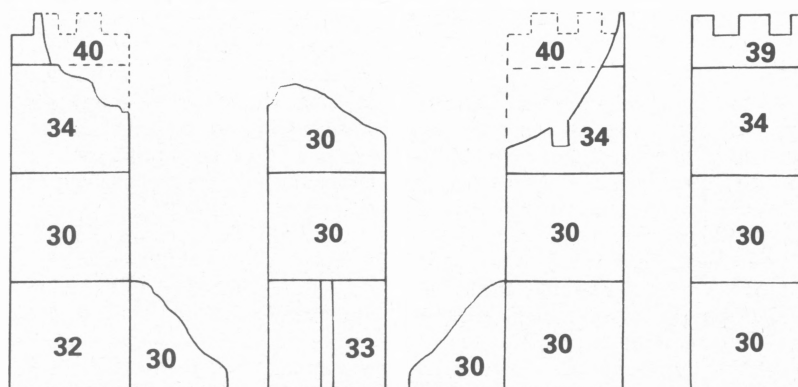
builders in the United States have described their methods of making masters (from wood, dental plaster or other materials), moulds (from latex or white silicon rubber) and castings (from plaster) and a few of the American 'craftsman' type wood kits include stonework cast in this way. In Britain also a few expert modellers have experimented with these techniques. Trevor Hughes has not only cast stonework from his own moulds but he has also devised an excellent method for modelling stone built cottages and other structures. He casts simple rectangular slabs of plaster about 3/8 inch thick in a mould made up from wood or simply on a board. The slabs are then cut up into individual blocks of stone and are used to build up the structure block by block just like the original full-size cottage or house, giving a very realistic effect. The process was described fully in an article in the May 1979 issue of *Airfix Magazine*.

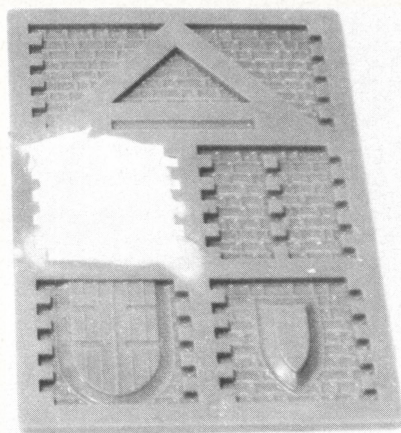
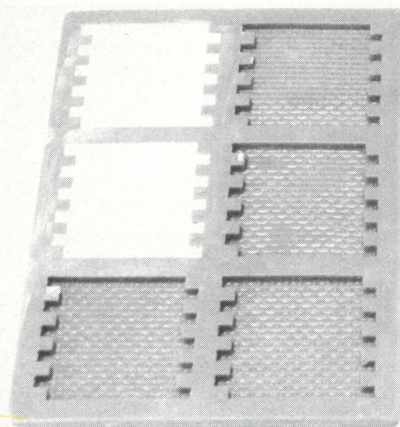
Also worthy of mention is the useful range of plaster cast parts, such as walls and roofs, made by Ossett Mouldings. These parts have a cloth backing to give extra strength. Scratch-builders will find them valuable in providing realistic detailing with a minimum of effort.

However the Linka system brings the method within the scope of all by providing suitable moulds and other equipment and materials together with full instructions, making the whole thing, literally, 'child's play'! The sets include a variety of moulds for brick and stonework, log and lapboard sections, including doorways, window openings and so on, together with Linkalite casting compound, adhesive, measures and the simple tools needed. Clear glazing material with windows of various types printed on is available and guttering, drainpipes and sheets of signs are also produced for detailing purposes. The manufacturer has also drawn up plans for a range of 00 scale structures suitable for railway and military models, giving full details of the parts needed and how they are to be assembled. These provide a useful basic guide to get you started but the greatest scope of course comes in designing buildings of your own using the Linka parts.

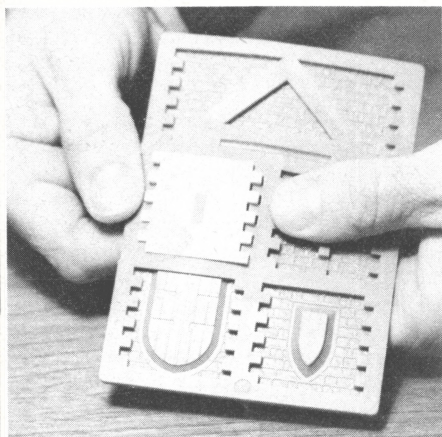
The system is easy to use as it is intended to be suitable for children as well as adult modellers. The mould selected is first

Diagram shows how the ruined watch tower was designed, based on the Linka system. Numbers indicate the Linka moulds required. Other structures can be designed on these principles.

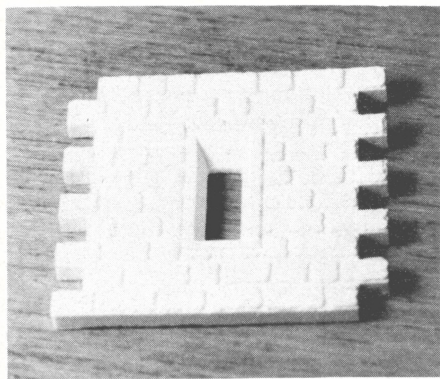




Moulding Compound has been poured into one section of the mould at right. After about 4 minutes the straight edge of the Multi Purpose Tool is drawn across the surface of the mould to remove excess Compound and to leave a neat moulding. This has been done for the two sections of the mould at the left.

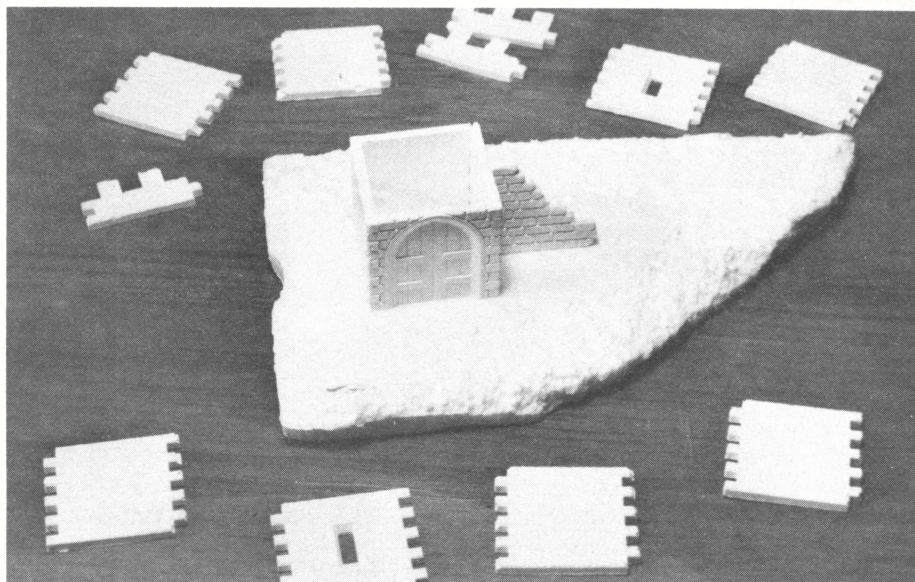


After about half an hour the castings can be removed from the moulds by carefully flexing the moulds as shown here.



Castings are then left for a day to harden. This close up view of a casting shows the very neat finish which results from the Linka moulding method.

prepared by rinsing it with a little washing up liquid in warm water, the surplus being shaken off. The Linkalite Moulding Compound is gently mixed with water using the measures provided and is then poured into the mould cavities, taking care to push it well into all the corners. The mould is tapped to remove any air bubbles and as the mixture begins to set, a straight edge is drawn across the surface of the mould to scrape off any excess mixture. After about half an hour the casting can be removed by



A small piece of scrap polystyrene foam was used as a base for the ruined tower. This picture shows the castings ready for assembly with the first five pieces already glued together. Finished model is shown below before painting — with some stones chipped away.

flexing the mould and easing the rubber away. The casting is then left to dry for 24 hours at room temperature or for four to eight hours in an airing cupboard.

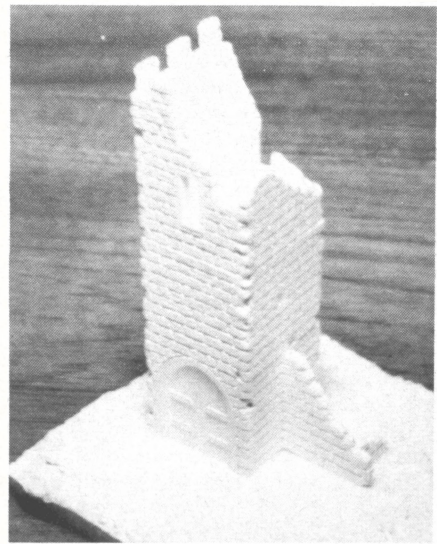
The castings should be stored in a dry place until required for construction. It is best to store them in boxes according to types rather than mixing them all up in one large box as searching through for the castings you want may then cause damage to others. The castings interlock for assembly and they can be fixed together with a little of the adhesive supplied. If necessary the castings can be cut or shaped by scoring a line across and then snapping. Basic paints are provided in the sets but poster paints, ordinary household emulsions or Humbrol enamels can also be employed for colouring.

To build the watch tower for Westport I followed the standard Linka casting procedures described in the kit instructions and briefly outlined above. The diagram shows the parts needed and how they are assembled while the photographs show the model. Obviously once you get the set of

Linka material you are not restricted to making only a watch tower for your version of the layout. You can make other buildings (such as a platelayer's hut or the station building) and you may prefer to put a home or some other structure up on the hill instead of the watch tower I have chosen.

In fact, these suggested layout ideas are not intended to be followed slavishly. It will be quite evident that the same track plan on this board could have been given a variety of scenic settings and the buildings can be varied to suit. I have GWR locos and stock and chose a rather neutral 'west' setting — rolling hills and an inlet that might be a corner of Poole harbour or somewhere around the Dart estuary. But you could equally well make the whole lot very rugged and rocky to depict a Scottish style branch or a New England short line setting (both even better as concepts, perhaps, than a GWR setting for this particular track plan).

Or again a fairly alpine setting could be used with small German locomotives and four wheel stock. There are kit buildings available which are eminently suitable for all these alternative settings.



Shopwindow

NEW KITS AND MODELS.

New items of interest to railway modellers are reviewed by the editorial staff or contributors and opinions expressed are theirs, not necessarily the views of the publishers. While every effort is made to give latest catalogue or recommended retail prices, prices quoted should be taken as a guide only due to variations in discounts, ex-charge rates, taxes, and postal rates. Most items are generally on sale in usual outlets, but addresses of suppliers are given where there is only limited availability.

Playart: 00/HO track sections, UK 22p each

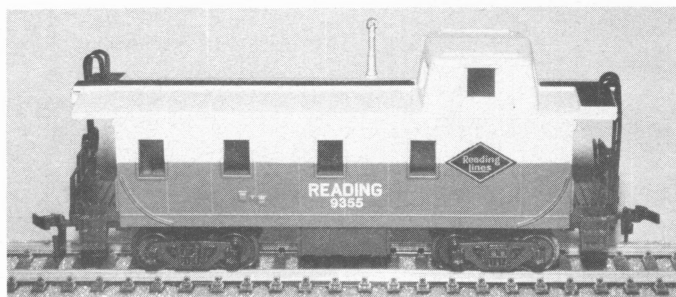
Hadley Hobbies, 131 Middlesex Street, London E1, are importing brass OO/HO Code 100 track sections, standard straights and curves, from the Playart range made in Hong Kong. The track geometry is 18 inch radius, 12 pieces to a circle. The track matches all other makes but has the virtue of being cheaper than most. It is virtually identical in appearance to other OO/HO makes, with grained sleeper effect, and three fixing holes per length. Brass track is not everyone's favourite but Hadley commend it for fiddle yard or tunnel sections where it is out of sight. In fact, we've found that when fully weathered and with only the top surface bright, brass track is not really noticeable even in the foreground. This range should be of interest to anyone with a tight budget.

Hadley JV: Catenary System kit, for 00/HO, UK £2.78

Hadley Hobbies, 131 Middlesex Street, London E1, has a series of highly detailed but reasonably priced kits of supports and wires for an overhead catenary system. These are of French prototype but closely resemble the catenary posts and rigging used by BR. In fact they appear to be the only items currently available suitable for a BR layout. The Hadley system is very complete, and of quality appearance. The wire sections are fabricated in fine brass soldered wire. The posts and insulators are of plastic, and the hangers are metal. All assembly is by screw or nut and bolt. Cyanoacrylic cement is commended for cementing the posts to give maximum strength. As Hornby are planning a Class 86, and Lima a Class 87, there will be a need for catenary equipment for anyone running BR electrics. Send 40p to Hadley for a full price list and description of the system. The standard kit we had, for three pairs of posts costs £2.78 and a length of fabricated wire, 8¼ inches long, costs £1.44.

Bachmann: Modern Steel Caboose, 1:87 scale/HO gauge, UK £1.35

Latest in the Bachmann HO series is this steel caboose with modernised styling, as has been produced by one of the major US car builders and is in service with several Class 1



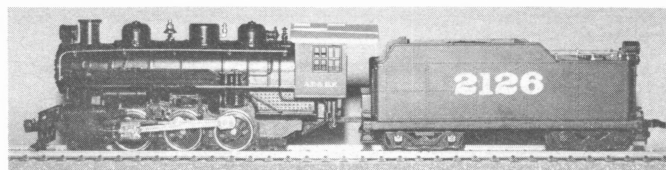
railroads. Though a little stark by traditional standards, its raked cupola is not unattractive, and it looks good bringing up the rear of modern era trains.

Our sample ran freely and well, having the usual RP25 section wheels and horn hook couplers. The sample is in Reading colours — a company now part of Conrail — but other finishes are available or can be expected from Bachmann. The sample came from Bachmann importers Victors Ltd, 166 Pentonville Road, London N1.

Bachmann: USRA 0-6-0, 1:87 scale/HO gauge, UK £13.50

Last year Bachmann produced the ubiquitous USRA

standard 0-6-0 in N scale. Now they provide the same thing in HO, a very welcome move as this type of locomotive can be used on almost any US-based layout. The USRA 0-6-0 design was one of several standard types specified during World War 1, but most proved so successful that they were built for many years afterwards in preference to bespoke locomotives. The Bachmann model depicts the Baldwin



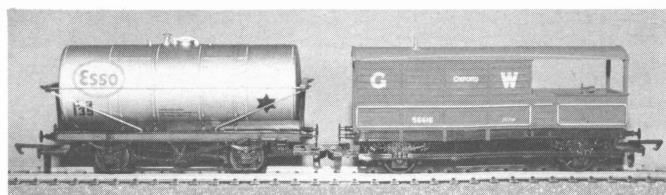
version and checks out exactly to scale drawings save for the omission of cab handrails and reverse levers on the valve gear which would need to be added. Separate handrails, RP25 wheels, and a reasonable enough performance all go to make this a good model for the price. There is a dummy front coupler, however, which needs replacing in a loco used so much for switching and transfer work. Bachmann should really have included a working coupler here. The tender is not the standard USRA design, but as many engines were given other tenders as time went on this is not a particular error. Indeed even the tender provided could be further altered if desired. However, the tender supplied does have the necessary light for tender first running. The model is available in ATSF and PRR markings. Strangely enough, however, ATSF was one of the few big companies who never had USRA 0-6-0s, while the Pennsy examples had cut-down tenders which would necessitate altering the tender provided.

A pleasing gimmick is the provision of a smoke unit and a supply of oil to run it. The unit proves most effective, positively puffing out great quantities of smoke, but the oil tends to wander, particularly if the model is returned to its box before all the fuel is used up.

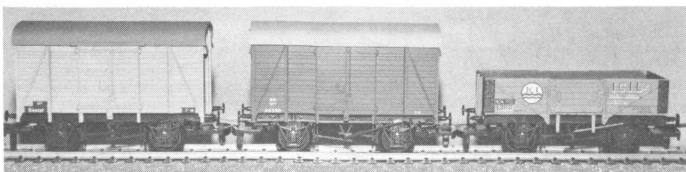
This model would be useful for short line layouts. The Reader Railroad (now closed) still had one of these locos in service in the early 1970s. Our sample came from the importers, Victors Ltd, 166 Pentonville Road, London N1.

Airfix: Wagons, 1:76 scale/00 gauge, prices in text

A big batch of new wagon releases come from Airfix in the GMR range, almost completing the range shown in the 1980 catalogue. First comes a Tizer private owner van (not illustrated here) in yellow/blue Tizer colours, based on the BR standard van. This is non-authentic in that Tizer never had vans (as far as is known), but if they had, no doubt they would have looked like this. In fact, this is the most convincing of 'bogus' PO vans and leads to the idea of a miniature Tizer drink bottling plant or warehouse where these could be used. UK price £1.95. Next comes the GWR standard 'Toad' in GW colour and marked for Oxford as home depot. It is beautifully finished, but could be improved by the purchaser painting the underframe GWR grey to match the body in true GW style. UK price £2.15. The Esso tank wagon is a further variation on the RCH oil tanker design already produced in Shell finish and



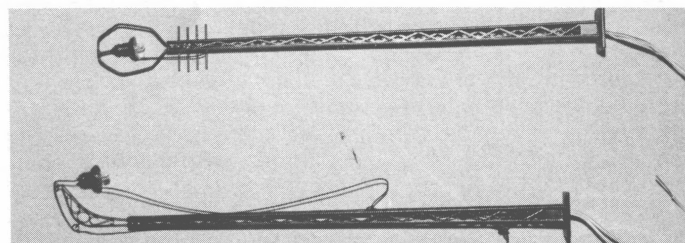
is suitable for BR days. UK price £2.15. A modern and authentic private owner wagon suitable for BR days and the diesel era is the next release, an ICI Alkali Division line traffic 13 tons wagon with 10ft wheelbase, beautifully modelled and with very fine lettering. UK price £1.95. Lastly we have another excellent model, the standard Southern Railway box



van, once seen in thousands, and quite distinctive with its unequally spaced planking. The model comes in late SR brown finish (about 1938 onwards) and in early BR grey finish. These wagons were seen all over Britain though, naturally, they were more common further south. UK price £1.95. All models are available now and all have the Airfix-GMR feature of brake blocks lined to the wheel rim and a wealth of fine detail.

Herkat: Yard and Platform Lamps, 1:87 scale/HO gauge, prices in text

Herkat is a West German firm specialising in useful accessories, mainly of an electrical nature. Among their many invaluable products are numerous scale lights, all of which are wired for actual lighting. They are quality items in brass, and finely detailed, supplied complete with generous leads to take through the baseboard to your wiring system. We had two tower lamps to look at, both suitable for

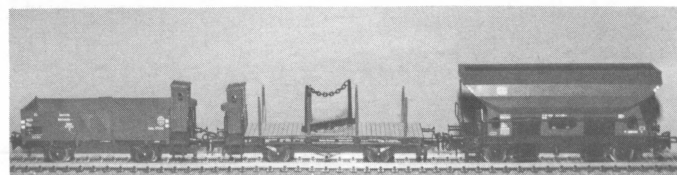


illuminating freight yards or station areas. These have hand-made lattice posts. One has a fixed light, while the other depicts a gas light with dummy wind-down lamp for the lamplighter to ignite. The UK price is £6.86 each, but the lattice masts can be had for £1.99 each to fit your own style of lamp (or signal). The third item is a modern concrete street or platform lamp and several other styles are available.

These are but three of over 50 lamps suitable for OO/HO scales from the Herkat line and covering all periods in style. The UK distributor is A.M. Richards, 6 Richmond Way, Fetcham, Leatherhead, Surrey, and a SAE to this address will bring a list of the full Herkat range (which also includes switches, LEDs, and scenic items).

Märklin: German Wagons, 1:87 scale/HO gauge, prices in text

These are the three latest Märklin releases, all standard types. The first two, however, are Deutsche Reichsbahn vehicles of the 1930s and are marked and lettered for that period. This is useful for those who have Fleischmann and Roco old time coaches of this period, for there are few wagons to match currently available. First method is a DR class 010 open wagon with brakeman's cab (UK £6.14) and the second is a H10 flat wagon with a pivoting chain platform 'UK £6.84). The third model is a modern Talbot hopper of type Ed (UK £7.71). This one is not so finely detailed as the Roco example recently reviewed but it is extremely sturdy and it works. The side levers can be turned to open the hopper doors, as on the



prototype, but the doors are also linked to a plunger type lever in the chassis which can be tripped by an uncoupling ramp in the track for remote operation.

The models are all strongly made. They have metal wheels, and for 2-rail operation it would be necessary to change to insulated wheels of the Fleischmann type.

Mainline: 'Jubilee' 4-6-0, 1:76 scale/00 gauge, UK £25.00

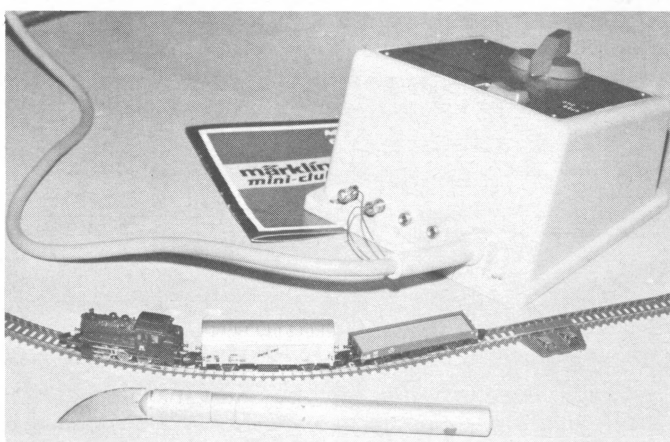
Mainline continue their way through Stanier's 4-6-0 classes, all using a common 4-6-0 chassis from the original *Royal Scot* model, this time with the LMS red version of a 'Jubilee' class locomotive, long promised and now delivered. We ran a 'Test Track' feature on the 'Patriot' model in the May 1980 issue and all the comments made then still apply to this mechanically identical model, save that this sample ran rather more smoothly and quietly than the 'Patriot' sample. Painted and marked as 5690 *Leander*, the model is beautiful to behold and impeccably finished, complete with shed plate on the smokebox door. It checks out very precisely against scale drawings, save that the sand pipes are simplified and omitted in the case of the leading pair (this is not criticism, for the brake blocks almost obscure them anyway). The cylinders are too short, to allow bogie swing, but not too noticeably so. No 5690 was a late production engine with separate top feed. A possible conversion would be to the earlier type of boiler with combined dome and top feed.

Märklin: Mini-Club Basic Set, Z Gauge, UK £61.57

Märklin Mini-Club is not, of course, new and is now a well established range in its own right. Märklin came up with a completely new system some years ago, adding new items yearly so that now a most comprehensive system is available, with all that is necessary for any kind of layout. The track gauge is 6.5mm and the scale is 1:220. For 1981 a range of British outline models is promised, actually body kits on Märklin chassis as far as locos go. In USA some American outline stock is becoming available in a similar way. Various German manufacturers (such as Noch) also make accessories in the scale.

The UK distributors of Märklin Mini-Club, A.M. Richards, 6 Richmond Way, Fetcham, Leatherhead, Surrey, have given us the basic set (No 8166S) for a deeper acquaintance with the system and we've now had the chance to see the potential. Even by N gauge standards, Z scale seems tiny though we got used to handling the stock fairly quickly so that the novelty of tiny size soon wears off.

The starter set we have has a Class 89 0-6-0T, a covered



van, and a low-side wagon, plus a small oval of track. The system is 8V DC and Märklin advise use of their special power units (though other suitable types are available including the ECM Rambler). A power unit is supplied with the set. Space beating is a major advantage, of course. You really can make a little layout on a tea tray or in a desk drawer if you use Z. For all that the track geometry is generous with track radii of 14.5cm, 18.5cm, and 22cm, which are large relative to the scale.

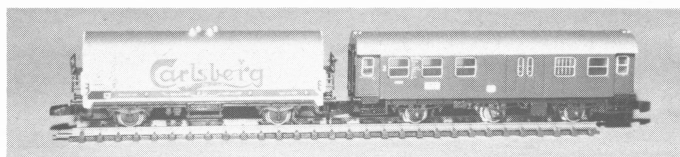
The set comes neatly packaged in a stout box with foam compartments. The power unit is bigger than everything else combined. It has a sealed German plug which must, of

course, be changed to the British type. The track is coarse for the scale in the way that N gauge track is, though from eye level it looks much finer. Corresponding care must be taken with the rail joiners. It is easy to buckle them if you handle the track too clumsily when setting it up. We found the train itself to run like a dream, with the loco very responsive to the controls, though it didn't run as slowly as the 144 class loco we tested at the same time (see 'Test Track'). The claw type coupler looks obtrusive on individual models but is much less noticeable in a complete train. Overall the loco performance was as good as the best of N gauge locomotives and better than many, quite impressive for such a tiny unit.

For extending the basic track set, Märklin have further track outfits in their SET programme which are designed to build up into a complete layout 1112 x 452mm in size, and a scenic sheet with all building sites marked is available for this. However, if you want to build your own layout you can buy track sections separately (sample price is 67p for a 220mm track length) and turn-outs start at £10 for a hand-worked pair (ie, two units). It can be seen from these prices that they are in higher than most N scale prices, so although you are getting superb quality you also have to pay for it. On the other hand you are getting character and reliability, and an advantage of space saving. If you made a small layout, did the scenic work yourself, and bought wisely, you could probably produce a layout for a little more than you would spend on a N gauge layout. For leaflets and price lists on Mini-Club, send a large SAE to the distributor.

Märklin: Mini-Club stock, Z scale, prices in text

If you start in Z gauge, you'll need some stock to add to the basic train. The latest releases are a Carlsberg beer van (DB type 1 chqrs) (UK £3.86), a convert coach 6-wheeler (UK £6.49), and ex-Prussian 6-wheel coaches (UK £6.49) (not shown here). The coaches each come in three forms, all-2nd, compo, and brake-end. The sample illustrated is a convert



coach of type BD3yge. The finish and quality of these little models is quite remarkable, with plated window frames and flush windows, plus minute but legible lettering.

Noch: Streugras, all scales, UK £1.40

Making the grass grow in miniature demands various techniques, the popular ones being dyed lint or scatter material. Now Noch have come up with a good idea for improving the texture, using basic physics principles, in effect, to make scatter material stand on its end to simulate the actual vertical blades of grass. Called Streugras, it comes in a flexible dispenser rather like a talcum powder pot, complete with perforated nozzle. Ordinary office glue is brushed lightly but thoroughly over the surface to be treated, then you just squirt the flock from the container over the glued areas. In the process an electrostatic charge is imparted to the flock powder, making it all stand on end, in which form it stays when the glue dries.

We tried this on one end of the Western Mining Co layout this month (see article) and were delighted to find it met all the claims Noch make for it. A pleasing effect of growing grass is achieved. Light green, dark green, yellow, brown, red, and grey colours are available, suitable for mixing if required for rough pasture, moorland, or bog, etc.

The UK distributors are M & R (Model Railways) Ltd, 27 Richmond Place, Brighton, West Sussex.

Weylite: Showcases, all scales, prices in text

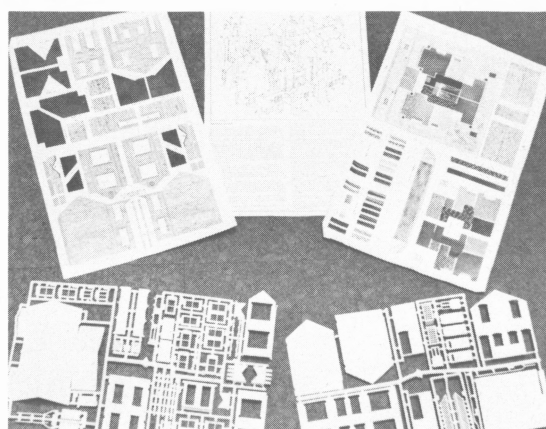
Weylite Ltd, 58 Normandy St, Alton, Hants, are offering a range of very nicely crafted showcases, in natural Brazilian mahogany to hang on the wall in the living room or hall. Sliding glass fronts are standard. Prices range from £11.50 for a knockdown kit of the small traditional display case, to



£44.95 for the large 5 shelf show case, complete and polished to a high finish. Individual cases can be made to order. Leaflets are available from your model shops, or direct from Weylite Limited. The picture shows the largest size, a smaller variant, and some of the small individual cases which are available.

Carson Baker: Semi-detached Houses, 1:76 scale, UK £2.89

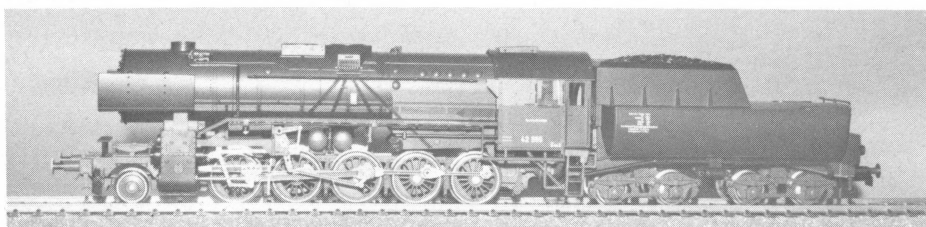
This interesting structure kit is a successful attempt to combine the advantages of plastic and printed card/paper models. The basic form is built up from moulded plastic parts giving ease of assembly and a sturdy structure. This is then covered with realistically colour-printed brick and tile paper. Smaller parts such as doors, window frames, chimneys, barge boards, drainpipes, and so on, are moulded plastic parts with excellent detailing. The kit even includes curtains and carpets printed in full colour, interior staircases accurately moulded, pavements and a 'For Sale' sign to add a slightly different touch to one of the houses. The instructions are very good including both sequential written assembly notes and an exploded diagram. The plastic parts are all identified by number, either on the parts or in the case of small parts on the adjacent sprue, thus avoiding any possible confusion. Best results will be achieved by the modeller with some previous experience of structure kit assembly but the beginner should also be able to produce an attractive and realistic model with a little care. This is an excellent kit and the resulting model will be better than most scratch-builders can achieve. The kit is available (post-paid) from Carson-Baker Ltd, Concordia Works, Carmichael Rd, South Norwood, London SE25.



W & H (Models) Ltd, 14 New Cavendish St, London W1, state that the well-known range of Jackson wheels distributed by them are now being manufactured by Romford Ltd, and will be integrated with the Romford range under the Jackson-Romford name; 9, 10.5, 12, 14mm 3-hole wheels are available and a new 16mm disc wheel has been introduced. Fuller details and a list can be had from W & H — send a SAE.

TEST TRACK

In this feature we take a closer look at the selected items which are tested and assessed by the editorial staff or contributors

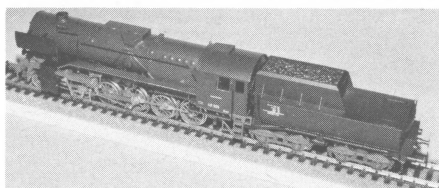


Liliput: Class 42 2-10-0, 1:87 scale/ HO gauge, UK £82.40

Liliput have a fine reputation for locomotive models and this one enhances it even further. Indeed, of the models tested in recent months, it is the one which has impressed us most, for finish, detail, and a remarkable performance. The real Class 42 stemmed from a scheme to build a wartime austerity version of the 1938 vintage Class 50. For war production this Class 50 design was simplified considerably to produce a standard Krieglocomotiv (war locomotive) which economised on materials, production time, and maintenance requirements. Various developments led to the Class 42, one of several 2-10-0 types produced. In fact the Class 42 was the heaviest of the lot, with an axle-loading of 18 tonnes. The 42s had bar frames and the starkest possible superstructure and motion, all beautifully portrayed on the Liliput model.

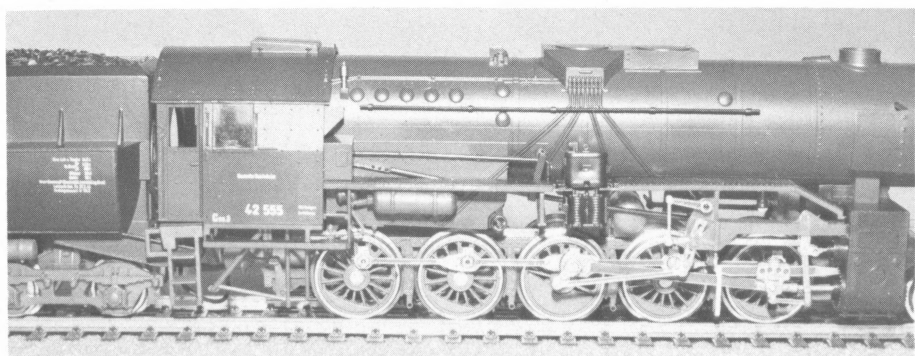
There are some commendable features, one of the best being the sprung tender drawbar. When the model goes round a sharper curve (it takes 17-18 inches happily enough) the tender automatically springs itself out against the curve. A separate pack of detail parts is supplied, containing brake and steam heat pipes, a mini-snowplough for the front, an optional front coupler, an optional ladder and a cover for the air-pumps.

The motor is inside the die-cast



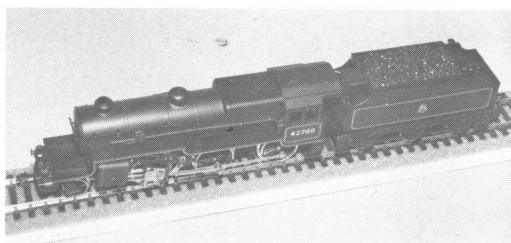
'water barrel' type tender, and the bogies are dummy, a rigid eight-wheel drive unit. Performance is superb. We found we could get the running (ie, continuous movement, not jerking) so slow that we timed its progress over a standard yard of Peco Streamline track. Using a H & M Clipper we made one run, tender first, at 3min 54sec, and had another go where we recorded a full 4min yard! Moving forward the slow speed running is not so astonishing, but we managed a best yard of 2min 58sec, still very slow running by any standard. Gearing is such that even top speed is not ridiculously fast, and though we didn't measure it, it looks to be about scale top speed.

Finish and marking of the model is impeccable. Our sample is in DB finish, but DR and OBB versions are also available. The wheels have finer treads and flanges than most European models. If there is any matter to watch it is in handling the model from box to track since there are many fine detail pieces in plastic, particularly at the front end, which could easily be damaged by incautious handling. Our sample was loaned for test by Victors, 166 Pentonville Rd, London N1, who hold stocks of Liliput models.



Lima: LMS 2-6-0 'Crab', 1:76 scale/ 00 gauge, UK £27.75

We've all been tantalised for quite a long time by the promise of the Lima 'Crab' and here it is at last, looking good in the advertisements and equally good when we opened the box. A lot of LMS fans will be awaiting this model, so it is sad to have to report some discrepancies which come to light on examination of the model. However, let's say the best things first. The finish is a neatly applied rendition of BR mixed traffic lined black, but the grey lining is too dark, as is the yellow of the number and the early style of BR totem — it should be quite pale but here is almost ochre or gamboge. These colour inaccuracies are not likely to notice, however, if you give the model a good grimy finish. The power rating is missing from the cab side and the smoke box number is yellow but should be white. Detail representation is very well done and in side view all the chassis detail of sandboxes, sand pipes, and brake rigging can be seen, all matching perfectly to scale drawings. The sand pipes and brake blocks are not lined up correctly in plan

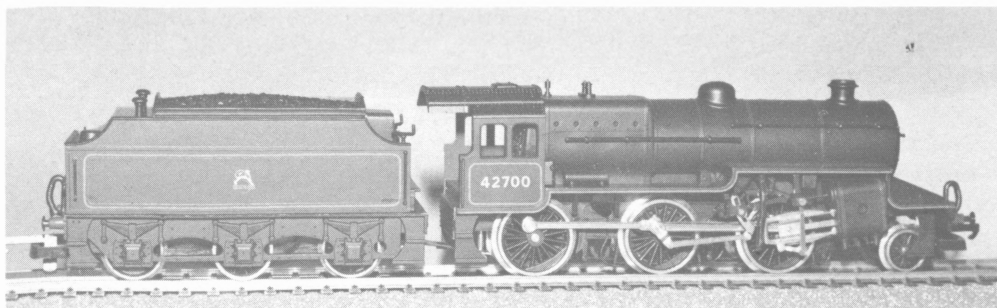


view, however, being almost flat against the chassis sides.

The valve gear looks good and runs well, while the wheelbase checks accurately. The wheels are scale diameter over flanges and are correctly spoked, but the centre drivers should have a noticeably large counterweight, missing on the model which uses a standard wheel throughout.

Superstructure detail is good with only minor omissions such as builders plate and the handgrip above the front steps. Backhead detail is incorporated in simplified form, but glass is omitted from the side windows — a pity as it was very noticeable on these big apertures. The handrails are plastic and a little 'bendy'. They could easily be replaced with wire, though photos of actual locos show the occasional bent rail.

Coming to the tender we run into the first major discrepancy — it is about 18 scale inches too long though the wheelbase is correct as is overall width and height. The length has been stretched to accommodate the Lima motor which is in the tender. Clearly the Lima motor is bigger than the Airfix one, though examination of the chassis and motor seem to indicate sufficient clearance inside, at least for the tender superstructure to be scale length. It may be that an assembly or machining problem was the cause of the stretch.



Strangely enough one 'Crab' tender did have a longer underframe than standard, but had a standard length tender body, which might suggest a conversion to accommodate Lima's error. The extra length is very noticeable against other models like the Airfix 4F.

All this might suggest using an Airfix 4F tender to get the perfect 'Crab'. We hate to spoil the fun, but this leads to the one big error which can't really be remedied by the modeller, namely that the loco itself is too narrow by 2.64mm, nearly 9 scale inches. In turn this negates one charming feature of the prototype, the way the tender was so much narrower than the loco. This spoiled the line of the real thing, but it was what 'Crabs' were all about. Digressing briefly, George Hughes of the Lancashire and Yorkshire Railway (and first CME of the LMS) designed the 'Crabs' soon after the grouping and they were being built in 1926 when he retired. They featured some American ideas, notably the outside valve gear and simple layout which was some way off the orthodox Midland Railway view of Fowler, who succeeded Hughes. With Hughes gone, the locos received standard Midland type tenders instead of a L & Y type designed to match, hence the discrepancy in style and width — the Midland had a narrower loading gauge than the L & Y. On the model the lack of this width discrepancy is at once noticeable. We thought the tender must have been widened to take the motor but no, it proved to be that the locomotive had been made narrower to match the tender! We can only think all this happened in the Italian factory. Could it be that the Italian tool makers did not appreciate the eccentric methods of British locomotive designers and tidied up the model when they found the loco and tender did not match up?

Amusing as this scenario may be, it does not help the LMS enthusiast add an unimpeachable model to his collection. No doubt many will overlook the discrepancies outlined here, and may indeed not care about them. The model still looks good.... but if you know the real 'Crab' then you'll be irritated by these dimensional errors for they cannot really be overcome.

Performance-wise, the model runs well and tracks well through turn-outs. In fact it ran more smoothly than our Airfix 4F, though was not quite as good at slow running — the slowest speed

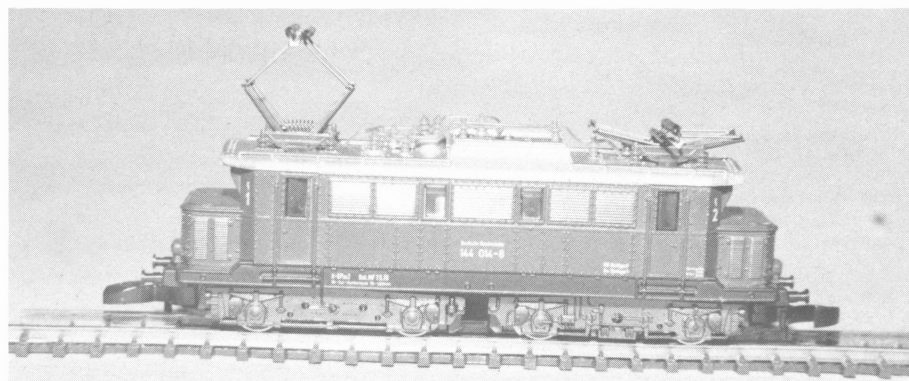
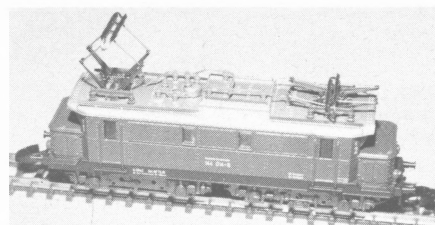
we could achieve was a yard in 14 seconds.

In general the track performance is about the same as other Lima steam outline models, nothing startling, but acceptable. Previous experience suggests that some models will run better than others.

One last point — by our measurement the loco is 3mm too short. We can't find where they went, though it may be partly in buffer length. This is the least noticeable of the discrepancies we found, only apparent on measurement. The tender drawbar is set rather long and on gentler curves you would do well to drill a second hole so that the cab-tender gap can be shortened.

Märklin: 144 class Electric loco, 1:220 scale/Z gauge, UK £42.31

First Z gauge model to reach us, this is a new release in the thriving and unique Märklin Mini-Club series. Previously we have only seen these little models running in shops, so it was pleasant to have this one for an extended trial. When seen buzzing around display circuits, these Z gauge models tend to look toy-like, but seen running from eye-level and studied very closely it is quite evident that this scale certainly holds its own against larger scales in visual terms. It became evident, too, that performance is equally worthy of bigger models. We left the model crawling with a short train for over two hours round a test circuit which included turn-outs. It was running at



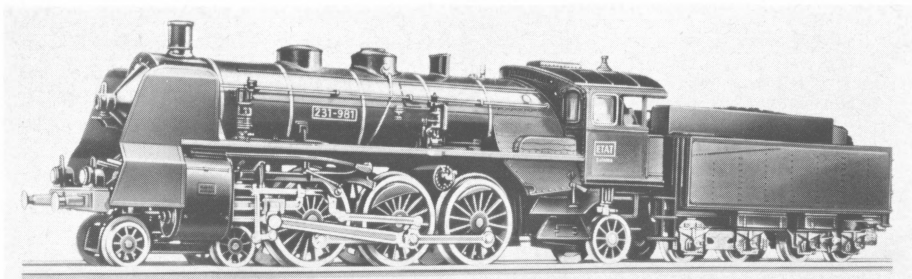
the lowest speed we could achieve, which was a fraction above the first division on the Mini-Club power unit. At the end of this period it had not faltered or stalled once and seemed happy to run for ever! The 144 class are true vintage machines dating from the 1931-1933 period, with some still in service for freight work. The model is fantastically detailed and all the major dimensions scaled exactly to quoted specifications. Positioned against a picture of the actual loco depicted (144 014-8) the model checked out in all details visible except that the cab steps below footplate level are omitted — though it would be easy enough to add them as a couple of slivers of Microstrip glued on the bogie sides. To be nit-picking the model footplate is black while it is green like the body on all photos we examined including 014-8. On this loco, too, the overhead warning plate has a white background while the model has the alternative version with no background — a very minor point which varied from refit to refit.

Roof wiring is in fine red plastic, which could do with toning down and the metal folding pantographs can pick up for overhead wires (included in the Mini-Club range) by adjusting a screw in the roof as on Roco models. All axles are driven with metal gears, and the chassis is die-cast metal. Note that the special Mini-Club power unit, or a power unit rated at not more than 8 volts DC, must be used with Mini-Club locos — check this before using a controller with these models or you may suffer an expensive burn-out!

Summing up, this is an astonishingly good model and seeing it performing makes you forget that it is a tiny powerhouse less than 2¾ inches long.

Märklin-Hamo: Bavarian S 3/6 4-6-2, 1:87 scale/HO gauge, UK £56.10

This is not new, of course, but came to us as a typical current production Märklin model. It was actually available before the Liliput version of the same thing (reviewed February 1980). Märklin produce the model in their regular series for stud-contact AC operation or as a Hamo model for conventional 12V DC. Externally and mechanically they are the same and the prices are the same too. The model comes in original Bavarian green



livery, post-war DB black, or pre-war French Etat finish. Fittings are varied in each to suit the appropriate period.

Märklin go in for old fashioned virtues like quality, robustness and mechanical reliability and precision, well demonstrated on this model. The entire model is in die-cast metal, but with no pitting or rough edges sometimes found with this sort of construction when other makers use it. The finish is eggshell smooth, all hand-rails are wire inserts and there is nothing to drop off. The tender is permanently coupled and the cab-tender gap, while not scale, is close enough for realism.

The lining and lettering is particularly well done, though not on raised plates for some of the cabside lettering as was found on the original. The motor occupies the cab and fills much of it.

The boiler is extended further into the cab than prototype to hide the motor but does not look too obviously extended.

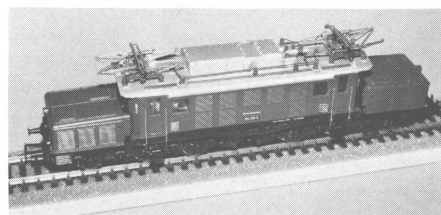
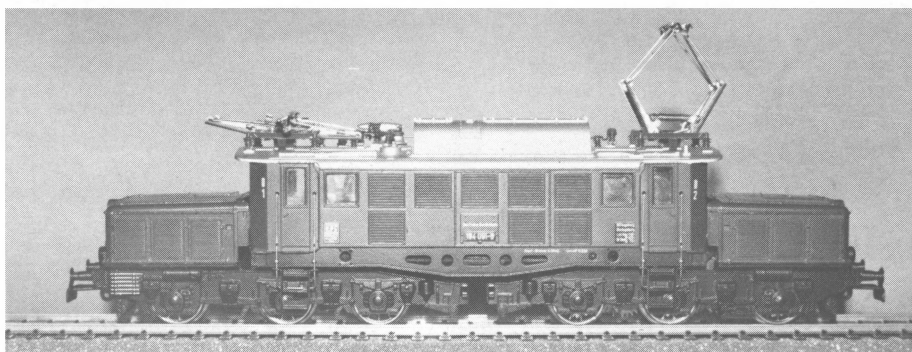
The performance of the model proved excellent with a faultless start-stop-reverse sequence which shows no hesitancy. It tracks well enough through standard turn-outs without stalling at low speed. There is no front end coupler but there looks to be room for one.

Comparisons can be made with the Liliput model, and the Hamo one is much simpler when it comes to detail fittings. For example, it lacks the magical inside working motion and full chassis detail which Liliput produced. However, external looks come close to Liliput's achievement and the Hamo model has robustness, plus a lower price.

Märklin-Hamo: Class 194 Electric Loco, 1:87 scale/HO gauge, UK £58.91

This is an example of a recent Märklin electric model, done in both AC and DC versions, ours being the latter. The Class 194 is a sort of 'Mini Crocodile' with articulated nose sections carrying C-C bogies and dates from 1940, with examples still in DB service. To us this was a much more impressive model than the Bavarian Pacific, being remarkably well detailed and truly capturing the hefty look of the original. The wealth of louvre and panel detail is very well done in die-cast form. Cab hand-rails are separate wire inserts and the cab steps are metal pressings. Only the handrails round the nose sections are cast in place. Lettering is neat and clean. The chassis valancing is black on the model but it appears to be green like the body on most photos of recent years. Lettering and finish are impeccable and the performance is very superior with a superb slow crawl and evidence of massive pulling power, aided by four traction tyres on the motor bogie. Pick-up is on the No 1 end bogie, but alternative overhead pick-up is possible too.

Couplers are screw fitted for ease of changing and all the Hamo 2-rail models feature the Fleischmann-style accessory stud in the chassis making them compatible with that system. This is a fine model worth consideration by any fan of German electric traction.



Bookshelf

part of the book covers electric locos and the diesel types which replaced steam, though it does not go past 1960 with these. Steam traction is covered class by class with good pictures and detailed descriptions and specifications. A nice bonus is the inclusion of a wallet in the back cover with facsimiles of official company route maps for 1958 and 1959. Obviously this is a book not to be missed by N & W fans or lovers of really big steam power.

Great North of Scotland Railway Album, by A.E. Glen, I.A. Glen, and A.G. Dunbar. £7.95. **Railways through the Chilterns**, by C.R.L. Coles. £5.95. Ian Allan Ltd, Terminal House, Shepperton, Middx.

Short trains, small stations, small locos (4-4-0s were the biggest) and lots of single line track characterised the GNSR. In terms of layout ideas it is a modeller's dream, for such branches and stations as Banff, Lossiemouth, or St Combs, among others, could have been built with modellers in mind. What modellers have

not got, however, is any ready-to-run GNSR loco, though after the 1923 grouping, some LNER types like B12s were used. GSNR Album is an invaluable record of the sights, scenes, and operations of the GNSR and well worth a look if you seek ideas for small layouts.

More familiar territory is covered in *Railways through the Chilterns*. GWR, LMS, and LNER routes, not forgetting London Transport, all ran through and the author recorded them all from the early 1930s to diesel days. His own pictures are supplemented by some from other photographers, notably H.C. Casserley, to provide an evocative and useful collection, all informatively captioned.

Early Tinplate Model Railways, by Udo Becher, £12.50. **Locomotives I Have Known**, by J. N. Maskelyne. £12.50. **Evening Star**, by Martin Evans, £5.95. Argus Books Ltd, 14 St James Road, Watford, Herts.

Udo Becher is a German collector, and the English edition of his book is very lavishly produced, 178 pages in colour

throughout. It covers the pre-war history of tinplate trains and accessories in grand style. The emphasis is naturally on Bing and Märklin and the other great German names, but it includes some coverage of Hornby and Lionel. Subject matter is very international, however, for the German makers did a big export business to Britain and America so they made many models for those markets. J. N. Maskelyne was a leading name in model railways for many years and was editor of *Model Railways News* for over 20 years in the days when Percival Marshall was the leading publishing house for model books. *Locomotives I Have Known* was published in 1959 shortly before his death in 1960, and it was followed by a second volume after his death. This book is a new combined edition of the two. Nearly 100 British locos are featured, some virtually unique to this book. All the drawings are to 4mm scale and the collection is useful for all interested in the pre-group scene.

Evening Star is a manual for building a live steam 2½ inch gauge model, but it would be worth a look if you are detailing a 9F in any scale.

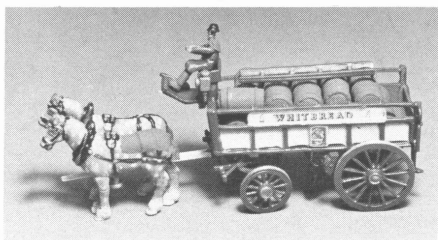
from page 93

Roadscene

A survey by Gerald Scarborough of road vehicle models of interest to rail modellers.

This month, by coincidence, saw a couple of horse-drawn vehicle kits arrive from two manufacturers so I thought it appropriate to make these the basis of a short 'horse drawn' special.

One of the kits was from W & T Manufacturing (Birmingham) Ltd. 200-222 Warwick Road, Greet, Birmingham, B11 2NB, who now have quite a range of kits suitable for 00 and N gauge layouts. This new kit is for a Bow Top Gypsy Caravan and is one of the best in the Towland Miniature Series. The detail in the framework, axles, springs, wheels, luggage rack, etc, is exquisite and the casting and fit of parts will form the basis of a delightful little model. Only the bow top on my kit proved difficult which I am sure was probably my mistake, not the manufacturers! Obviously on a model like this painting is going to be all important and I find this easiest to do in the flat after all parts have been cleaned up but before main assembly. The framework was



The Transport Replica's Brewers Dray, a kit which may still be available.

first painted in cream (Humbrol Lining Cream HR 103) including the wheels, shafts, steps, Pan box, luggage rack and the underside to which the rear springs and axle had been fitted. The turntable also has springs and axle fitted in place before painting cream but do not fit wheels or shafts at this stage. The panels between the framework were next painted in Scarlet (Gloy ST/M/46) to leave the cream painted frame in relief. The chamfers along the sides of the framing, the luggage rack, steps, windows, door frames and the body sides were all picked out in Poppy (Gloy STG5). The wheel rims and hubs, decoration on the spokes, etc, were also picked out in Poppy. The model can then be assembled, a few parts at a time, as the kit instructions fitting the shafts after the horse has been painted. The roof is painted Blue-Green (Gloy ST/M/53) after fitting in place and making good the centre joint with filler.

When completed the entire model was painted in a 50:50 mix of gloss and matt Airfix varnish to give an overall texture to the mixture of gloss and matt paints used. There are apart from the horse, two Romany figures, the man leading the horse and the woman to sit on the 'porch' and these can be painted in appropriate matt



Slaters' kit of a railway dray, also scratch-built Hansom. Load and the figures are Merit, shop front, wills finecast.

colours. Recommended retail price of the kit is £6.90, but it is of exceptional quality and will give you a challenging little model in painting and decorating to give a very colourful model for any period layout (I actually saw a similar one 'on the road' a few weeks ago) or simply as an attractive model in its own right.

Another model from W & T is the 4-wheel coal cart (£2.75), a simpler model than the Bow Top, of course, and this is shown with a load of Merit coal sacks and a Merit figure. There are in all nine kits so far in this range of horse drawn vehicles but, of course, the full list of products is available from W & T.

Second kit to come this month is from Slaters Plasticard Ltd, Royal Bank Buildings, Temple Road, Matlock Bath, Matlock, Derbyshire, and is a plastic kit of the Standard Midland Railway Dray. I do not appear to have a note of the exact price, it was 78p in 1978, but about £1-odd I would expect now. The kit is very neatly moulded, plenty of detail, easily assembled with Mek-Pak and, of course, at the modest price ideal for use as a source of parts for scratchbuilds of conversions to other heavy carts.

Slaters also hope to re-introduce their covered parcels dray and dog cart which will also be extremely useful kits as presented and as a source for conversion 'bits'.

I have used a Slaters dray front turntable for the Furniture Van, and though shown with a two-horse team it was made to complement a road locomotive, that is fitted with a draw bar in place of shafts. A very simple model as are all horse-drawn vehicles, really all you need are a few photographs as a guide to do a rough drawing and the rest can be built up with Plasticard.

Two more of these, which were constructed in an evening, are the Milk Float and the Ragman's cart. You will see that these use

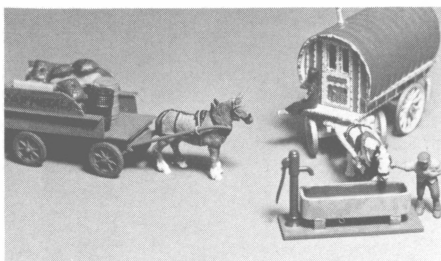
pneumatic tyred wheels which were from 'give-away' car kits. They represent slightly later models of horse-drawn vehicles from, say the Thirties to the Fifties. These two models were based on photographs in some of the many books which can now be purchased and of these, I think three in the *Discovering* Series by Shire Publications *Horse Drawn Carriages, Carts and Wagons* and *Horse Drawn Commercial Vehicles*, are perhaps all that you need. I see these are still available at, probably, 60p each; usually at Museums or Shows, and form a very useful basic library on the subject. Also useful is the Batsford Blandford Colour Series *Horse Drawn Vehicles Since 1760* which probably costs £3 to £4 now.

A useful source of wheels, apart from the Slaters kits, is of course, the Airfix Military Figures Sets, the Waterloo French Artillery in particular having wheels suitable for heavy carts and wagons.

The photographs will show that the popular Merit 'loads' can be used to good effect, as can their figures, and Merit also expect to have a kit of a Parcels Van in production very soon but more of that in a later article.

The attractive Whitbread brewers dray is a Transport Replicas kit which may still be available from some of the larger shops. If you can get hold of one it is worthwhile, being a good kit of this type of vehicle, complete with load, driver and two-horse team. Transport Replicas also manufactured a horse-drawn team, although this is of limited appeal from the model railway layout viewpoint, though a good example of the development of public transport.

Not strictly a horse-drawn vehicle, but definitely of the style, is another new kit from Fraction Models, 21a Wharf Road, Grantham, Lincs, of a Workmans Over-night Van. This was usually drawn by a road roller to the site of roadworks which used to be a longer operation than now, when we have hydraulic diggers, jack

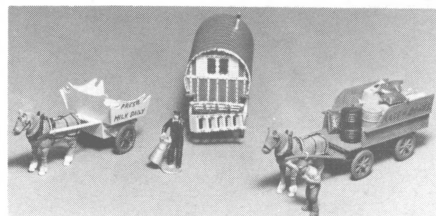


The Caravan and the scratch-built 'rag and bone' man's cart. The trough and pump are also W & T.

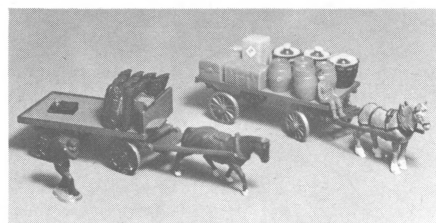
hammers and other heavy tackle. It took longer with a pick and shovel and this often entailed staying the night on the job, thus the living van came into being. Designed by Peter Armstrong from an original van, this model is well cast and detailed and just the thing for that 'hole in the road' situation. The typical hand-on-hip, other hand on shovel, workman figure is also neatly sculpted and the whole kit makes another lineside accessory and the basis for another interesting 'roadscene'. Price of this kit is approximately £4.75, but full details are obtainable from the distributors. There would be no great problem to convert it to one, or two, horse power, merely the substitution of shafts for the drawbar. It would need a good heavy horse, or possibly a pair, and those sold separately by Slaters would be about right.

To diverge from the horse-drawn scene, two new kits have only just arrived and I hope to give a few more details when I have had time to complete construction. Pirate

Models, 430, Hoe Street, London E17 9AA, need little introduction as their bus kits have long been popular. Their latest kit is perhaps their best to date and is for the AEC LGOC NS Open Top Bus and the covered top version will also be available soon. Some very fine, nicely detailed castings, about 50 parts in all to make up this kit, together with a good instruction sheet and a comprehensive transfer sheet.

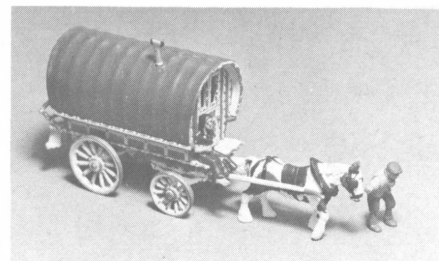


Scratchbuilt milk float and 'totter's' cart flank the Caravan, the rear view of which shows the steps slung from the luggage rack.



W & T Coal cart and Slater's railway drey, one a metal kit the other plastic.

Unfortunately there are no detailed painting instructions to back up these transfer options, but no doubt readers who know all about buses will have no trouble and the



W & T Bow Top Gypsy Caravan kit is a finely detailed model.

rest of us can sort it all out at the local library. Price of this excellent new kit is £10.50.

Second kit is from Garrick Leisure Consultants Ltd, 32 High Street, Kingston-upon-Thames, and is of a 1935 Bristol JJW Eastern Counties Bodied Royal Blue Express luxury coach of Western National. Buses Extra 14 contains an article on the history of Royal Blue, which modellers of this kit may find useful. However this kit has one of the most comprehensive set of painting instructions I have ever seen in any kit — metal, plastic or any other material. Options for either a Beadle or an Eastern Counties bodied coach are detailed in the instructions. I have not yet started construction, but the castings look of first class quality and will require the minimum of cleaning up. You'll need a magnifying glass to read the transfers, they are excellent, and the glazing is screen printed. It looks another superb kit and at £12.40, plus 38p post and packing, would make a star in any collection.

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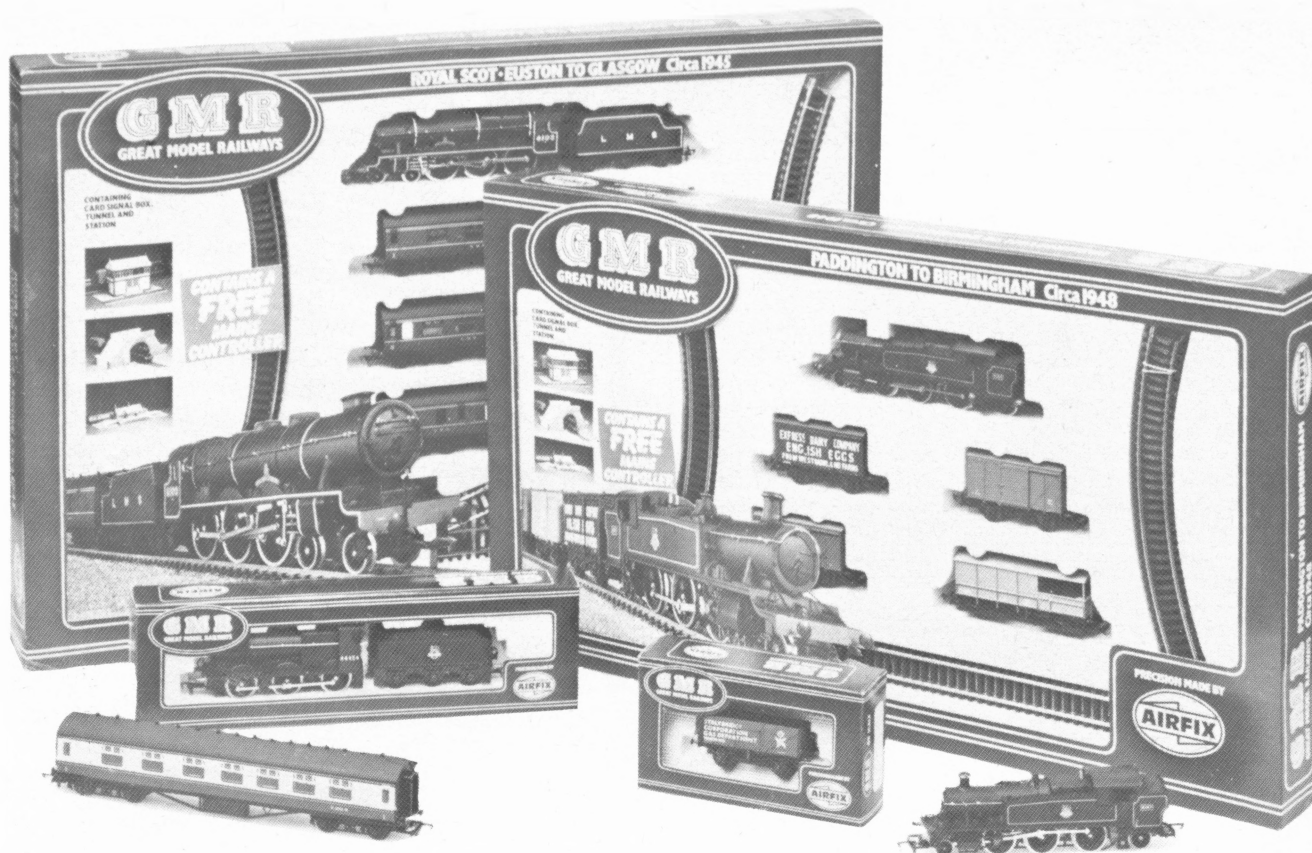
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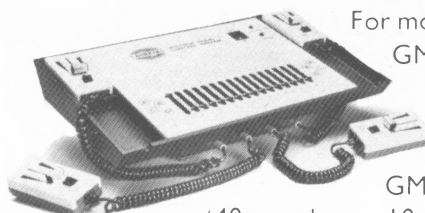
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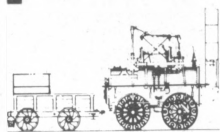
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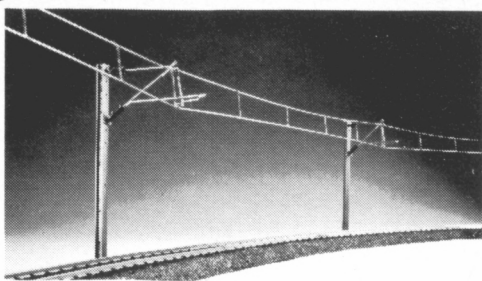
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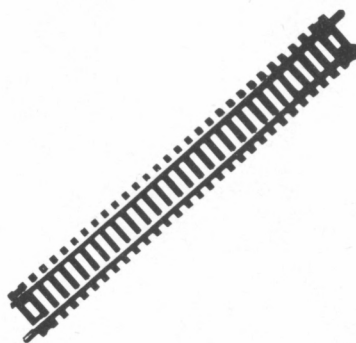
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Hornby's 1981 price list had not been published when we went to press. If you wish to reserve any of the the above loco's and SAVE 25% off the makers recommended retail list. Send £5.00 deposit (returnable on request anytime up until we can offer deliveries). Post and Packing £1.00 per loco max £2.00 per order.

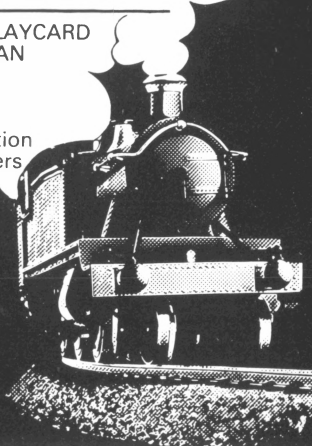
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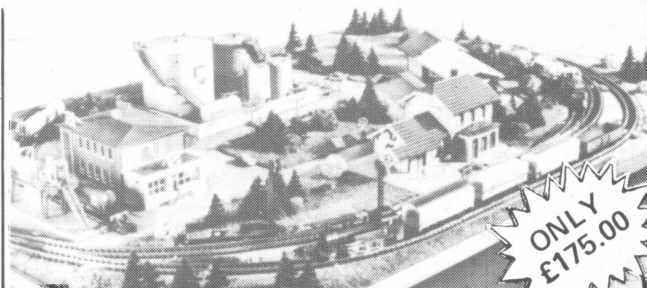
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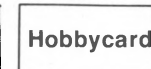
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